HCD-GRX20/RXD3

SERVICE MANUAL

AEP Model
UK Model
HCD-RXD3
E Model
Australian Model
HCD-GRX20

PHOTO : HCD-RXD3

HCD-GRX20/RXD3 is the tuner, deck, CD and amplifier section in MHC-GRX20/RXD3.

CD SECTION	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CX3
	Base Unit Type	KSM-213ECM
	Optical Pick-up Type	KSS-213ECM/C2NP
TAPE DECK SECTION	Model Name Using Similar Mechanism	NEW
	Tape Transport Mechanism Type	CWL-44-FR

SPECIFICATIONS

Amplifier section

European model

DIN power output (Rated) 40 W + 40 W (6 Ω at 1 kHz, DIN)

Continuous RMS power output (Reference) 50 W + 50 W (6 Ω at 1 kHz, 10% THD)

Music power output (Reference) 100 W + 100 W (6 Ω at 1 kHz, 10% THD)

Other models

The following measured at AC 110, 220 V 60 Hz;

DIN power output (Rated) 45 W + 45 W (6 Ω at 1 kHz, DIN)

Continuous RMS power output (Reference) 50 W + 50 W (6 Ω at 1 kHz, 10% THD)

The following measured at AC 120, 240 V 60 Hz;

DIN power output (Rated) 50 W + 50 W (6 Ω at 1 kHz, DIN)

Continuous RMS power output (Reference) 60 W + 60 W (6 Ω at 1 kHz, 10% THD)

Inputs

MD IN (phono jack): voltage 450 mV, impedance 47 kΩ

Outputs

MD OUT (phono jacks): voltage 250 mV impedance 1 kΩ

PHONES (stereo phone jack): accepts headphones of 8 Ω or more.

SPEAKER: accepts impedance of 6 to 16 Ω

CD player section

System: Compact disc and digital audio system

Laser: Semiconductor laser (λ = 780 nm) Emission duration: continuous

Laser output: Max. 44.6µW* *This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.

Frequency response: 20Hz – 20kHz (±0.5 dB)

Wavelength: 780 – 790 nm

DIGITAL OUT (OPTICAL) (Square optical connector jack, rear panel)

Wavelength 600 nm

Output Level –18 dBm

Tape deck section

Recording system: 4-track 2-channel stereo

Frequency response: 40 – 13,000 Hz (±3 dB), using Sony TYPE I cassette

Wow and flutter: ±0.15% W. Peak(IEC) 0.1% W. RMS(NAB) ±0.2% W. Peak(DIN)

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tunr section

Tuning range 87.5 – 108.0 MHz

Antenna FM lead antenna

Antenna terminals 75 Ω unbalanced

Intermediate frequency 10.7 MHz

— Continued on next page —

MINI Hi-Fi COMPONENT SYSTEM

MICROFILM

SONY®

AM tuner section

Tuning renge	531 – 1,602 kHz (with AM tuning interval set at 9 kHz) 530 – 1,710 kHz (with AM tuning interval set at 10 kHz)
Antenna	AM loop antenna
Antenna terminals	External antenna terminal
Intermediate frequency	450 kHz

General

Power requirements	
European model	230 V AC, 50/60 Hz
Mexican model	120 V AC, 50/60 Hz
Australian model	240 V AC, 50/60 Hz
Other models	110 – 120 V or 220 – 240 V AC, 50/60 Hz (adjustable with voltage selector)
Power consumption	
European model	105 W
Other models	115 W
Dimensions (w/h/d) incl. projecting parts and controls	
	Approx. 280 × 320 × 400 mm ($11^1/_8 \times 12^5/_8 \times 15^3/_4$ in)
Mass	Approx. 9.2kg (20 lb 5 oz.)
Supplied accessories:	AM loop antenna (1) FM lead antenna (1) Remote (1) Plug adaptor (for Asian model) (1)

Design and specifications are subject to change without notice.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

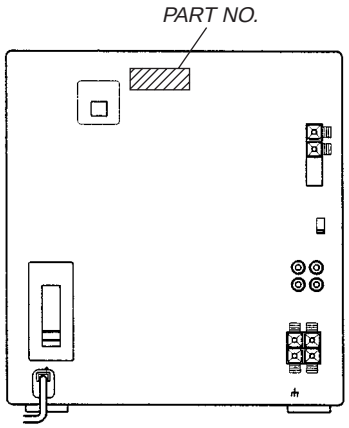
Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

MODEL IDENTIFICATION
— CABINET, REAR —



MODEL	PARTS No.
RXD3 model	4-221-603-0☐
GRX20 : AUS model	4-221-604-0☐
GRX20 : AR, E, SP, TW models	4-221-605-0☐
GRX20 : MX model	4-221-606-0☐

- Abbreviation
  AUS : Australian model
  SP : Singapore model
  MX : Mexican model
  AR : Argentina model
  TW : Taiwan model

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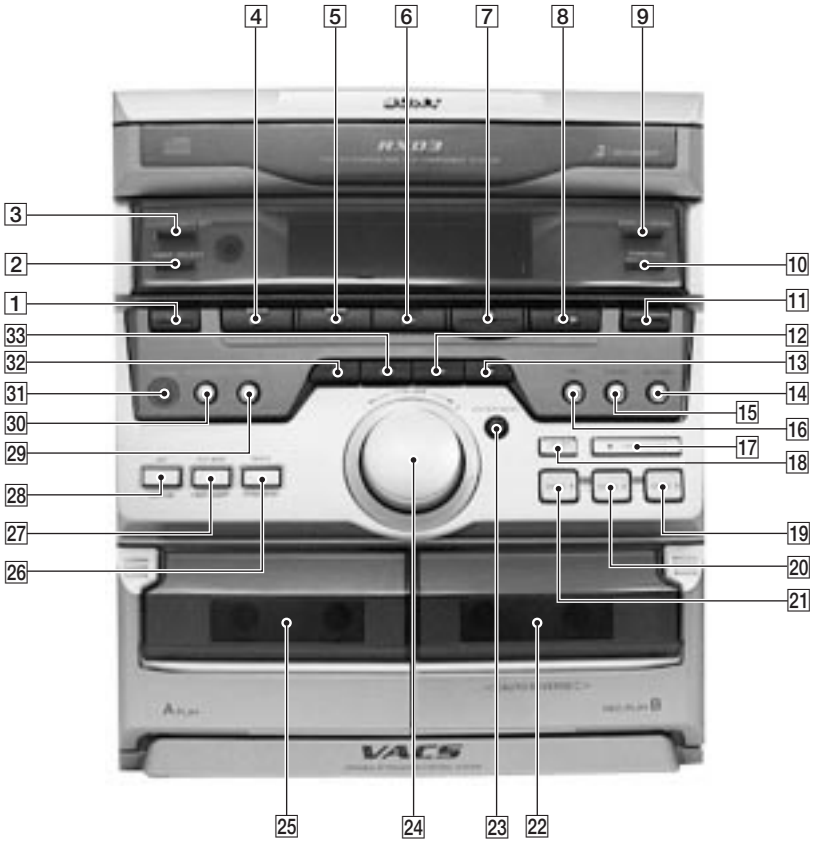
SECTION 1
GENERAL

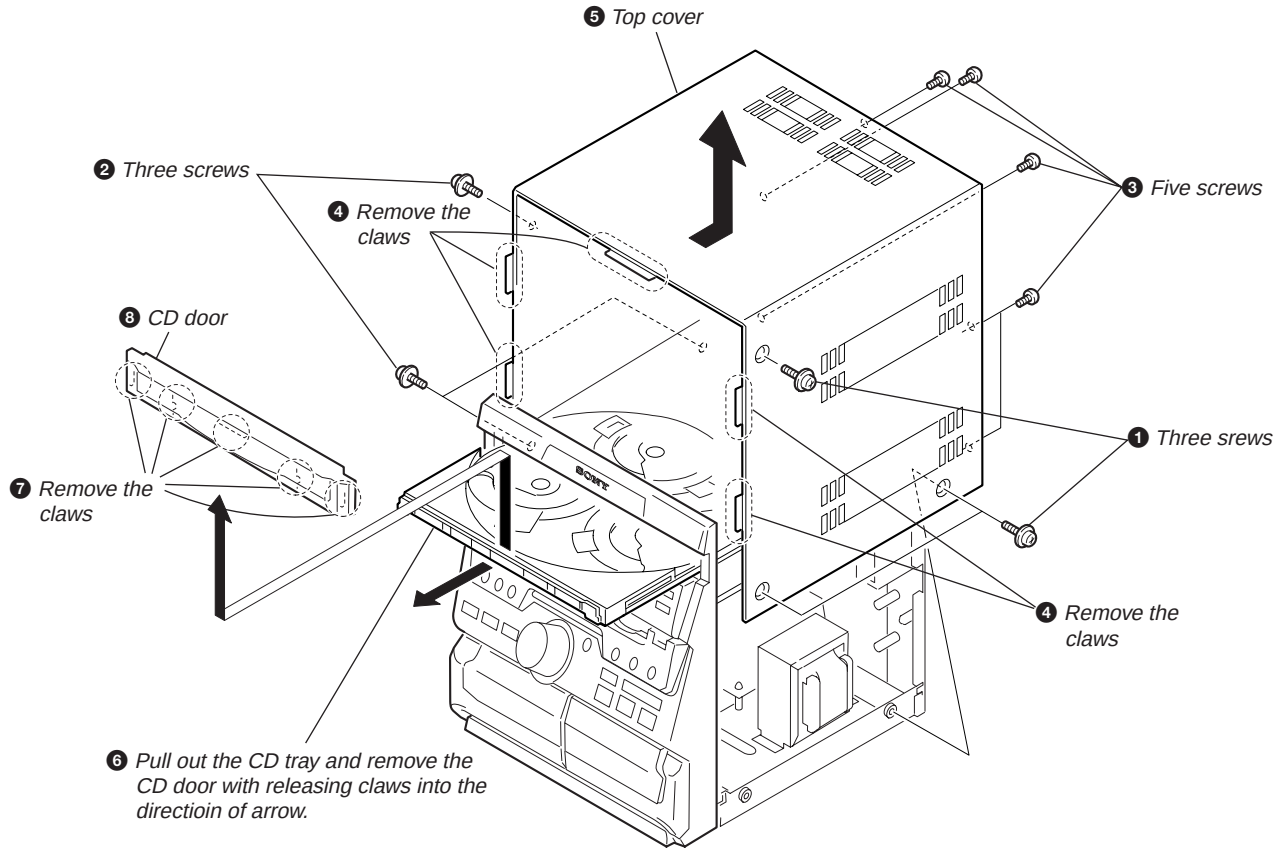


1 I/⏻ (Power) button
2 TIMER SELECT button
3 CLOCK/TIMER SET button
4 ► (TAPE A) button
5 ◄ (TAPE B) button
6 ► (TAPE B) button
7 ■ (STOP) button
8 ►II (CD) button
9 DISPLAY/DEMO button
10 FUNCTION button
11 TUNER/BAND button
12 ►►I button
13 ►►I + button
14 CD SYNC button
15 PAUSE button
16 REC button
17 ⏏ OPEN/CLOSE button
18 DISC SKIP/EX-CHANGE button
19 DISC 3 button
20 DISC 2 button
21 DISC 1 button
22 DECK B
23 ENTER/NEXT button
24 VOLUME knob
25 DECK A
26 REPEAT/STEREO/MONO button
27 PLAY MODE/TUNER MEMORY button
28 EDIT/DIRECTION button
29 DBFB button
30 FILE SELECT button
31 PHONES jack
32 I◄◄ – button
33 I◄◄ button

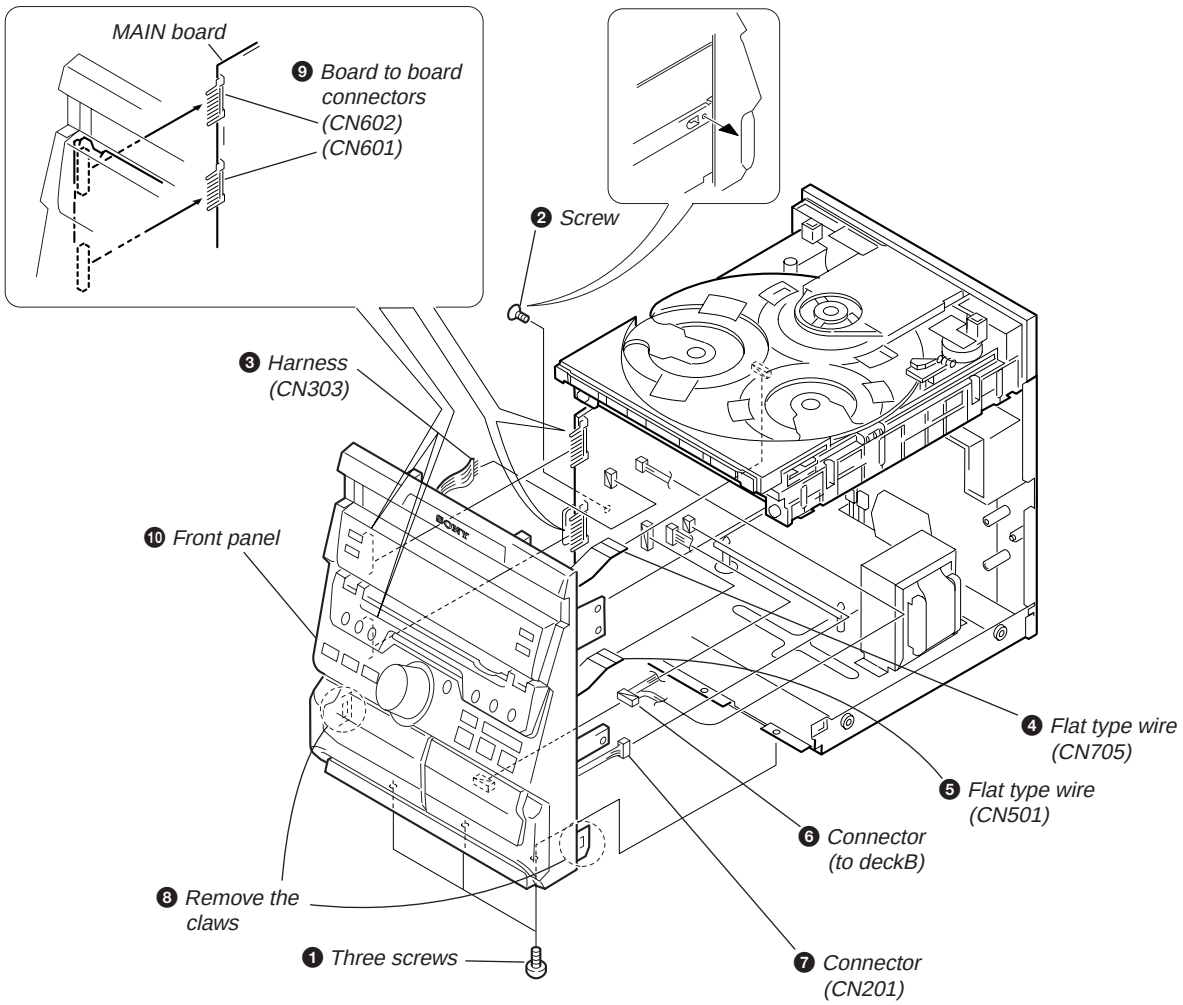
SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

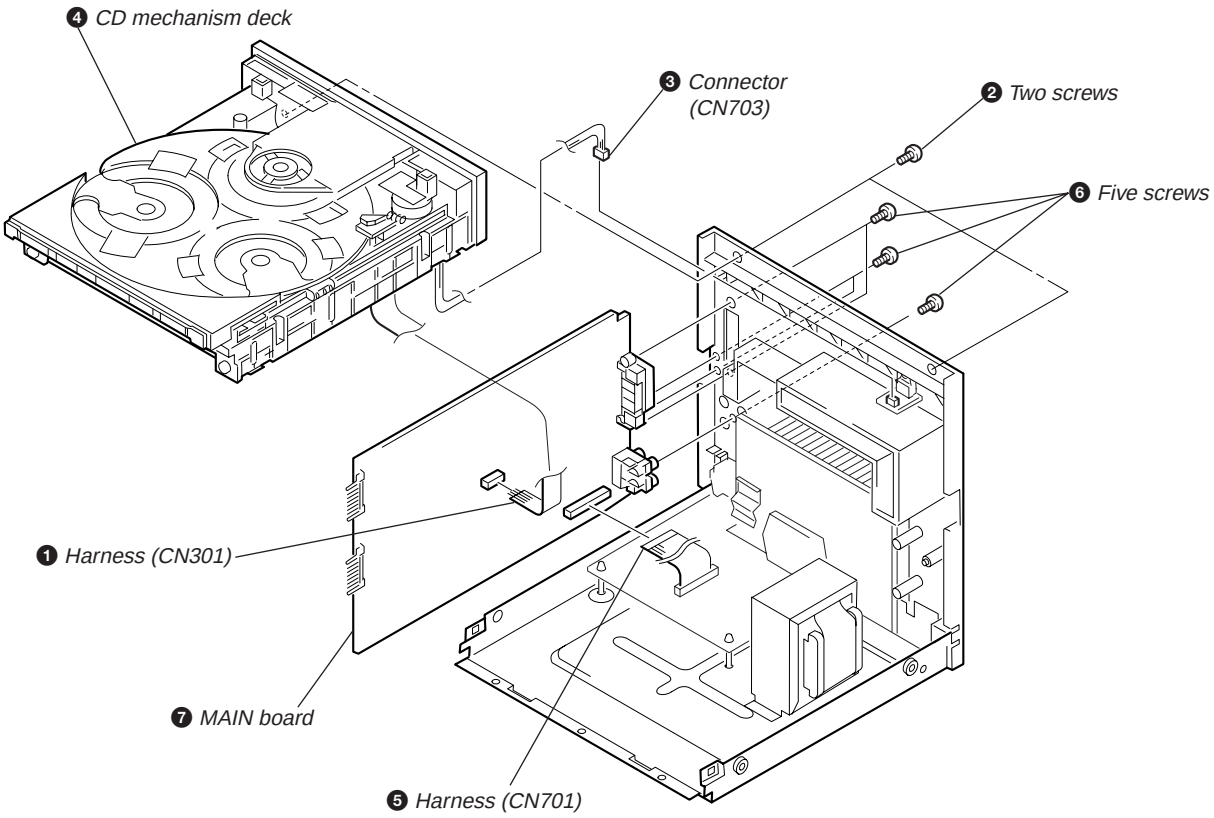
2-1. CD DOOR


❺ Top cover
❷ Three screws
❹ Remove the claws
❸ Five screws
❽ CD door
❶ Three srews
❼ Remove the claws
❹ Remove the claws
❻ Pull out the CD tray and remove the CD door with releasing claws into the directioin of arrow.

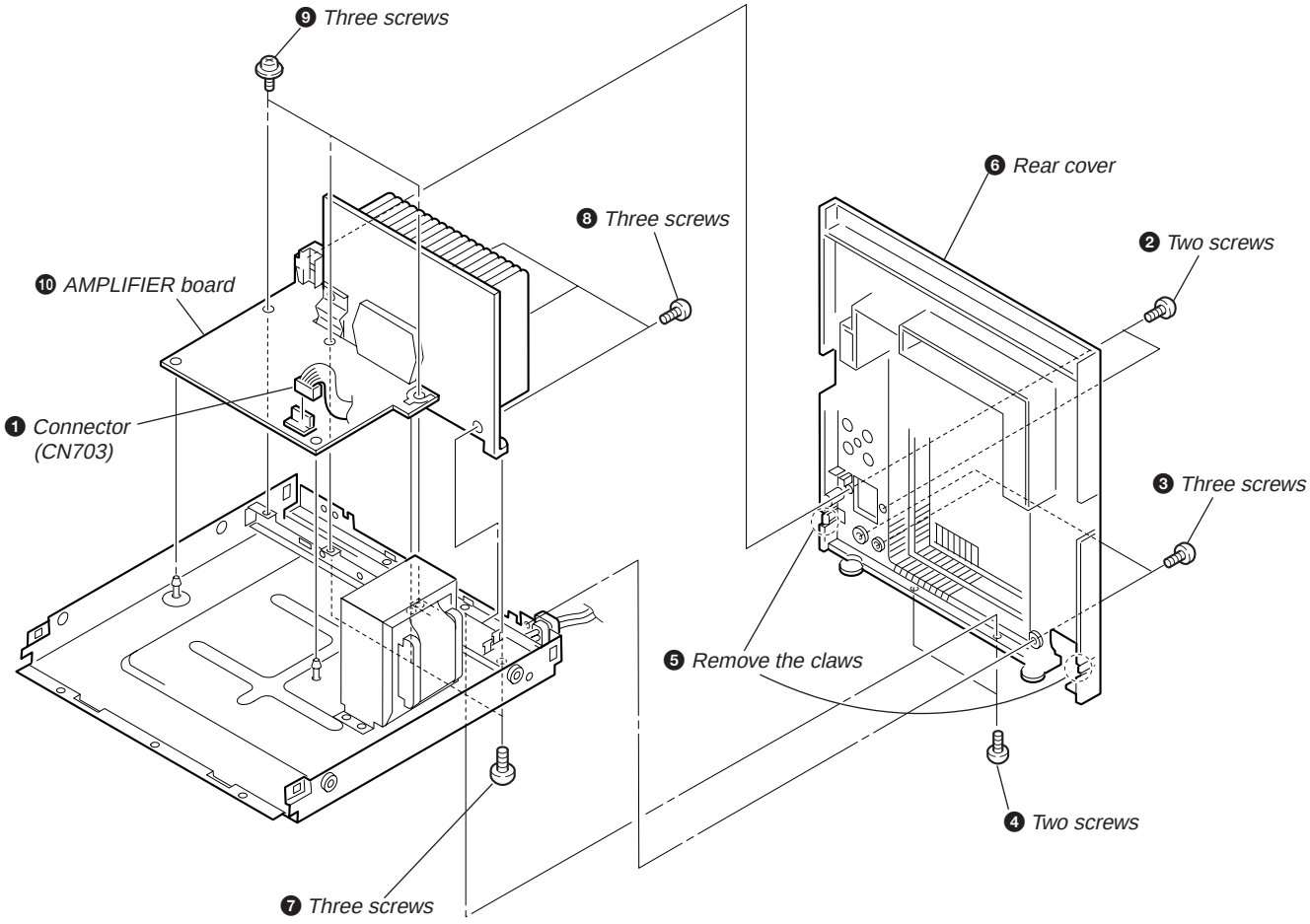
2-2. FRONT PANEL



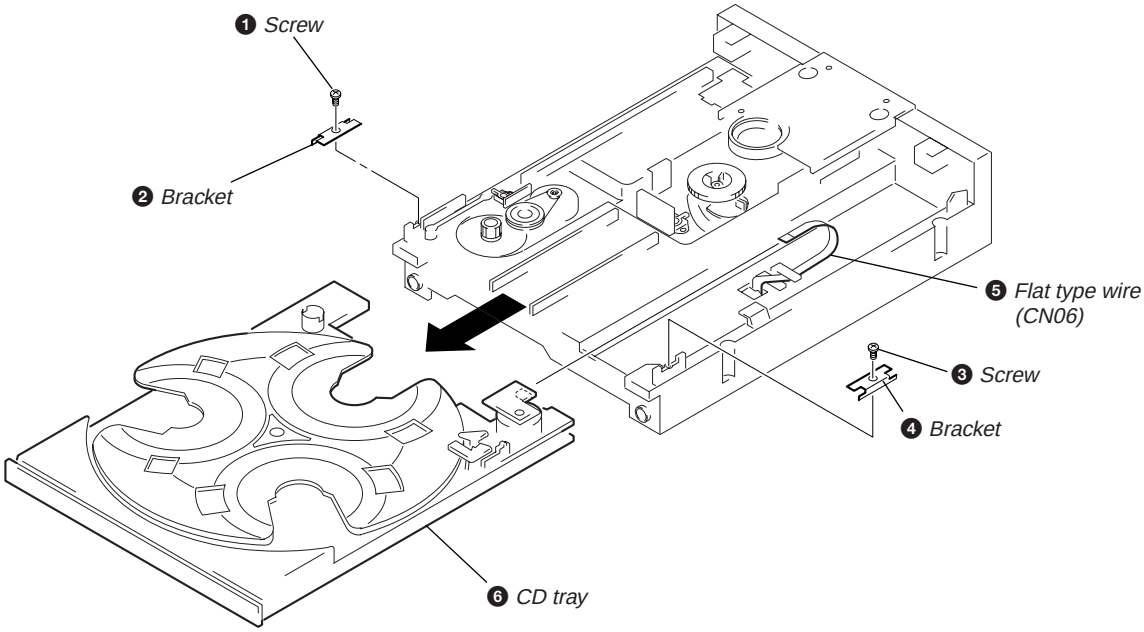
2-3. MAIN BOARD



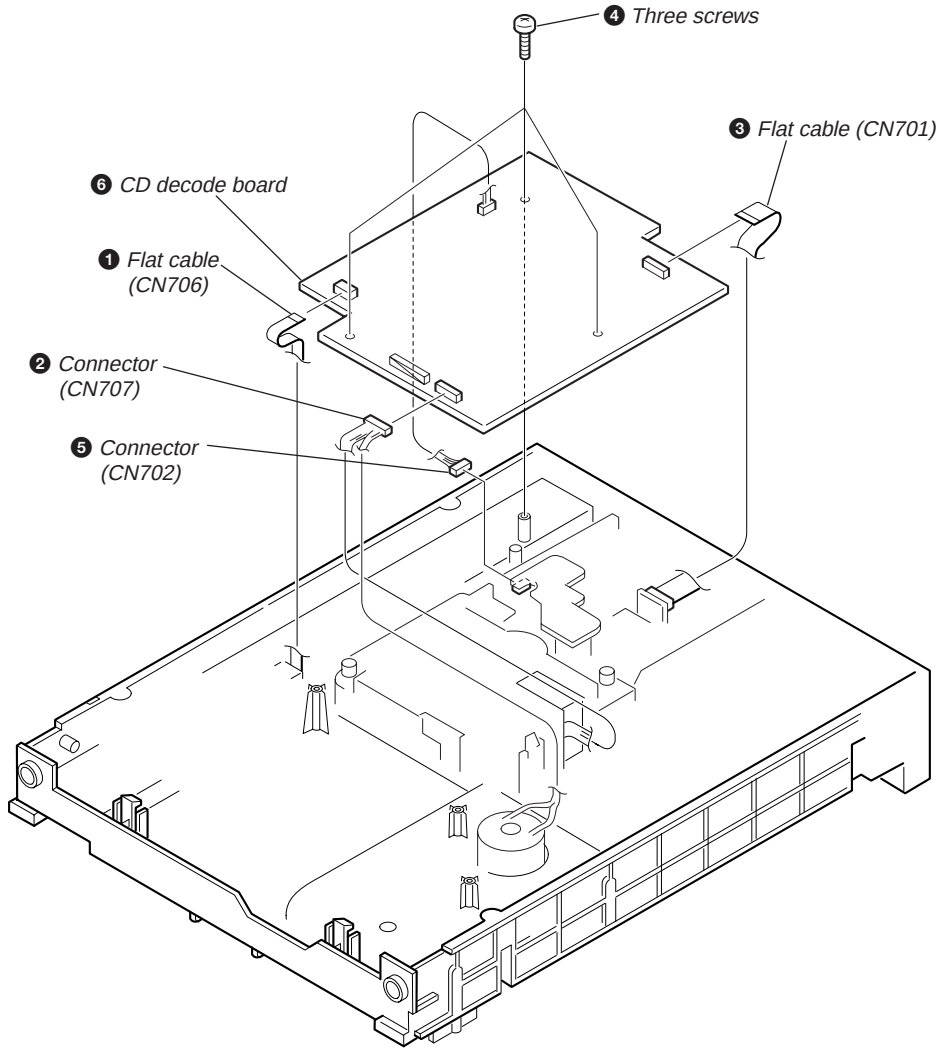
2-4. AMPLIFIER BOARD



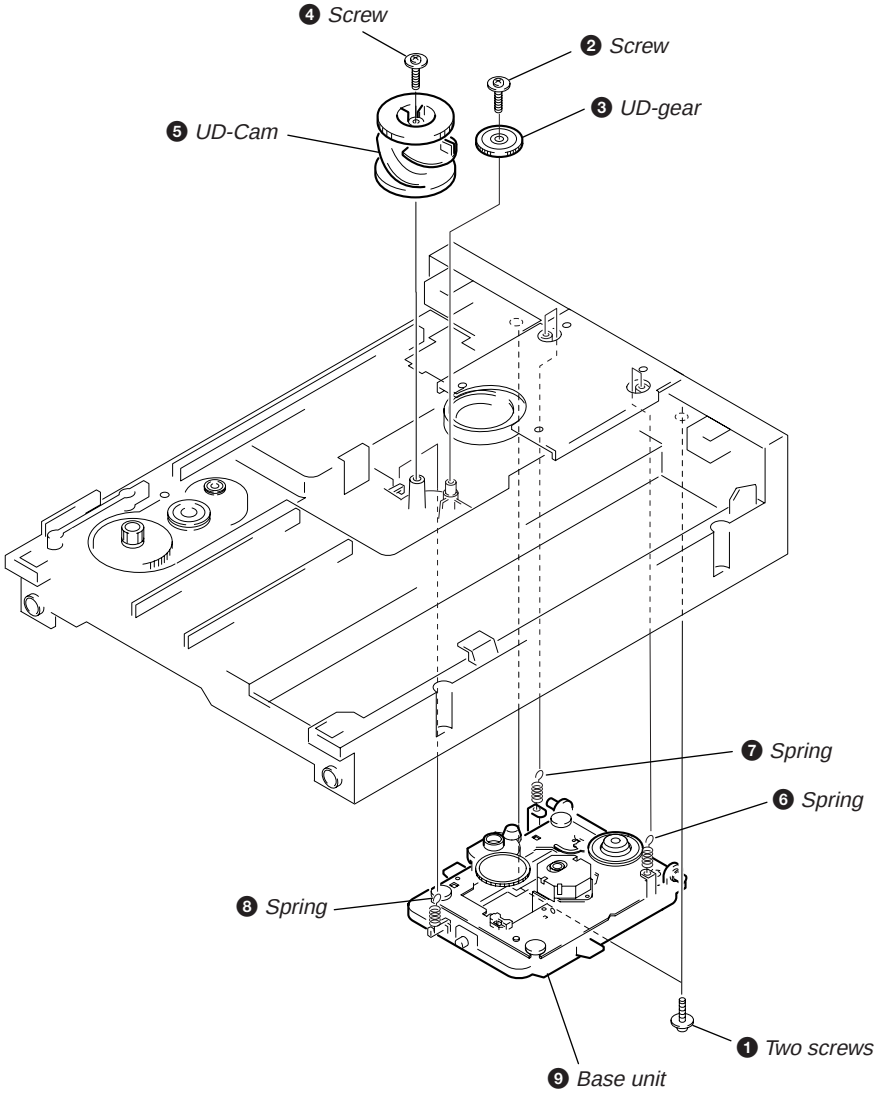
2-5. CD TRAY



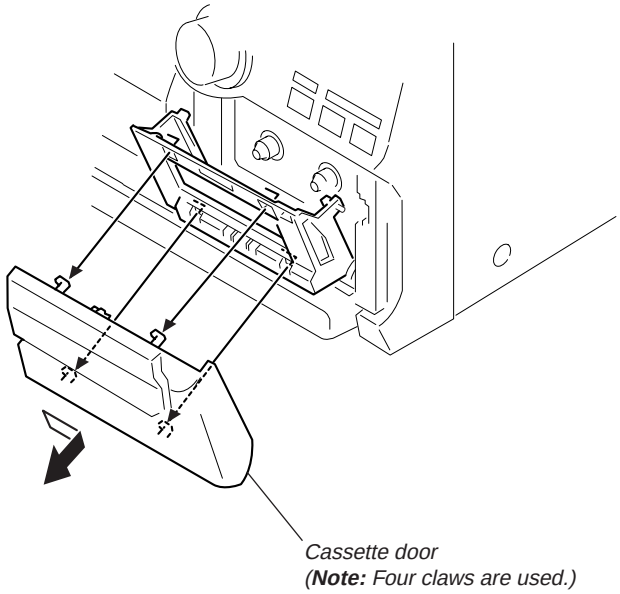
2-6. DECORD BOARD



2-7. BASE UNIT



2-8. CASSETTE LID



SECTION 3
TEST MODE

Function Key combination Description

Initialization
STOP + POWER OFF All preset data is re-set to the initial (default) value.

Model display
STOP + DISC 1 Mode name is displayed.

Destination display
STOP + DISC 2 Destination is displayed.

Version display
STOP + DISC 3 Version number of the microprocessor is displayed.

CD aging mode
STOP + DISC SKIP/EX-CHANGE Set discs to DISC 1 and DISC 3. The following operations are repeated when aging
starts:
1. DISC 1: TOC Read
2. Plays back the last music of the DISC 1.
3. DISC 3 : TOC Read
4. Plays back the last music of the DISC 3.
5. STOP
6. Tray is open and closed.

TAPE aging mode
STOP + PLAY A Insert a commercially available cassette tape (10 min) to the decks A and B. When aging starts, each tape is rewound and the following
operations are repeated:
1. TAPE A: FWD PLAY for one minute
2. TAPE A: FWD STOP for one second
3. TAPE A: FWD PLAY for three minutes
4. TAPE A: FWD FF to tape end
5. TAPE B: FWD PLAY for one minute
6. TAPE B: FWD REC PAUSE for one second
7. TAPE B: FWD REC for three minutes
8. TAPE B: FWD FF to tape end
9. TAPE B: REV PLAY for one minute
10. TAPE B: REV REC PAUSE for one second
11. TAPE B: REV REC for three minutes
12. TAPE B: REV FF to tape end.

CD service mode
STOP + OPEN/CLOSE The message “CD S - -” is displayed on the screen. The sled is moved to the outer circumference
while the FF button is pressed. Also, the SLED is moved to the inner
circumference while the REW button is pressed. After pressing the PLAY
button, FOCUS is turned ON, CLV-S is set, TRACKING and SLED servos
are turned OFF and ADDRESS 3 = 3F, 37 is set.

Display
STOP + DBFB All displays are turned ON.

Balance adjustment value
STOP + DISPLAY/DEMO The balance adjustment value is displayed.

Key check
STOP + FILE SELECT Function of the pressed key is displayed.

SECTION 4
MECHANICAL ADJUSTMENTS

Precaution

1. Clean the following parts with a denatured alcohol-moistened swab:
   record/playback head — pinch rollers
   erase head — rubber belts
   capstan — idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
FWD	CQ-102C	40 to 70 g • cm (0.56 - 0.97 oz • inch)
FWD back tension	CQ-102C	1 to 5 g • cm (0.01 - 0.07 oz • inch)
FF/REW	CQ-201B	55 to 140 g • cm (0.76 - 1.94 oz • inch)

SECTION 5
ELECTRICAL ADJUSTMENTS

DECK SECTION **0 dB=0.775V**

1. Demagnetize the record/playback head with a head demagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjusted.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.

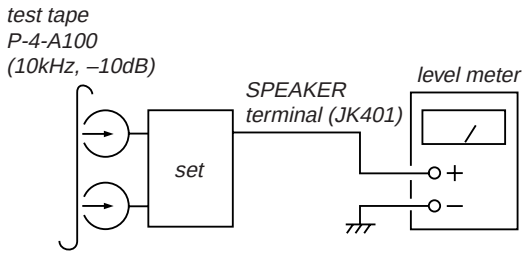
Tape	Signal	Used for
P-4-A100	10 kHz, –10 dB	Azimuth Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment (Deck A, Deck B)

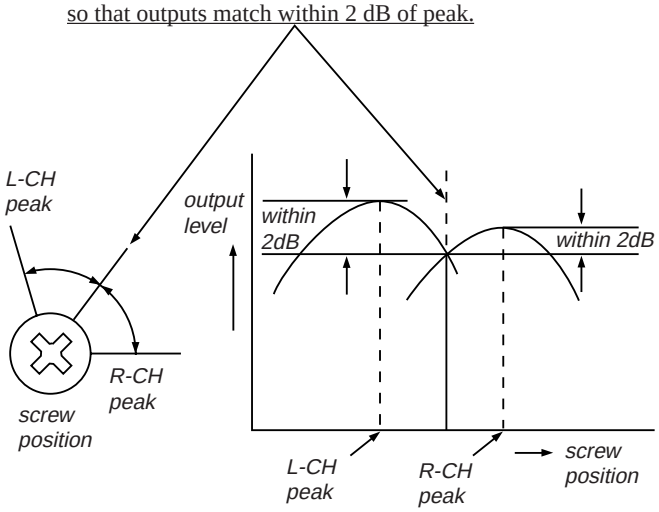
Note: Perform this adjustments for both decks.

Procedure:

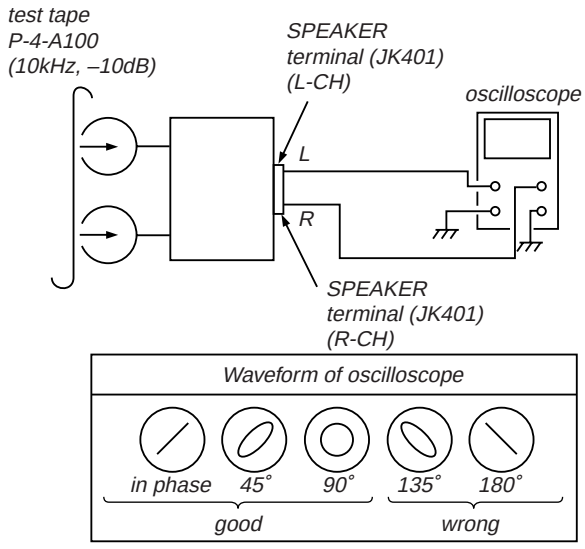
1. Mode : Playback



2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 2 dB of peak.

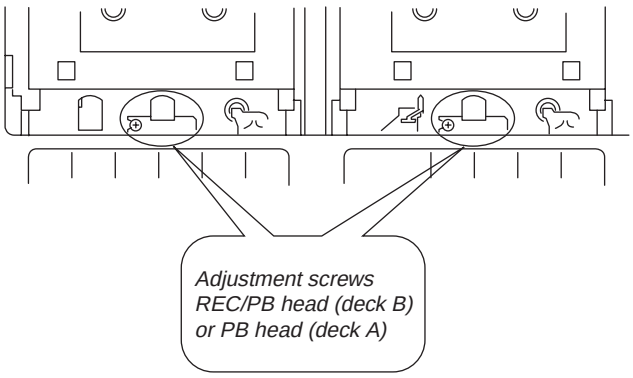


3. Mode: Playback



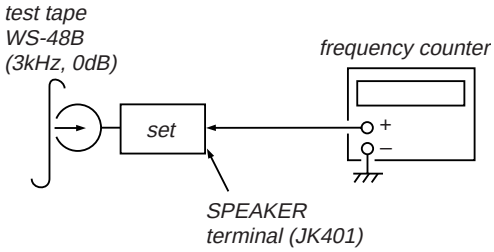
4. After the adjustments, apply suitable locking compound to the parts adjusted.

Adjustment Location:
Remove the cassette lid before adjustment (See page 9)



Tape Speed Adjustment (Deck A)

Procedure:
1. Mode: Playback

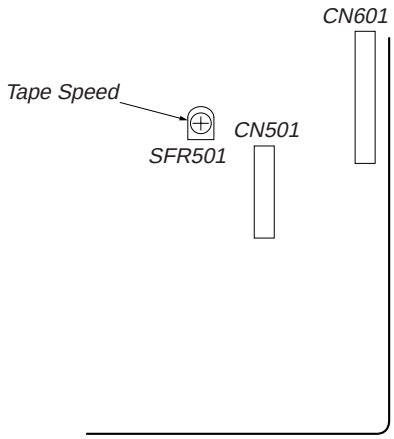


2. Adjust the SFR501 so that the frequency counter reads 3,000 Hz ± 90Hz.

Adjustment Location: MAIN board

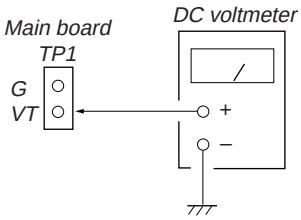
Sample Value of Wow and flutter
W. RMS (JIS) within 0.3%
(test tape: WS-48B)

[MAIN BOARD] — Component side —



TUNER SECTION | 0 dB=1μV

AM Tuning Voltage Adjustment

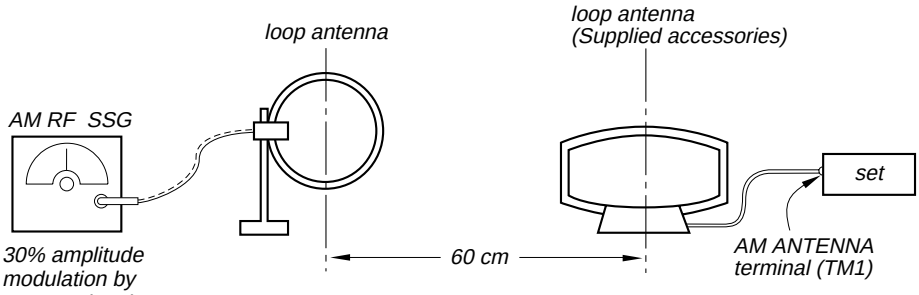


Procedure:

1. Set the reception frequency of the unit to 530 kHz.
2. Adjust L105 for 1.2 ± 0.05 V reading on the DC voltmeter.
3. Set the reception frequency of the unit to 1,710 kHz.
4. Confirm that the voltage reading on the DC voltmeter is within 8.0 ± 0.5 V.

Adjustment Location: MAIN board (See page 14)

AM Tracking Adjustment



Field strength dB (μV/m) =SSG output level dB (μV/m) –26 dB.

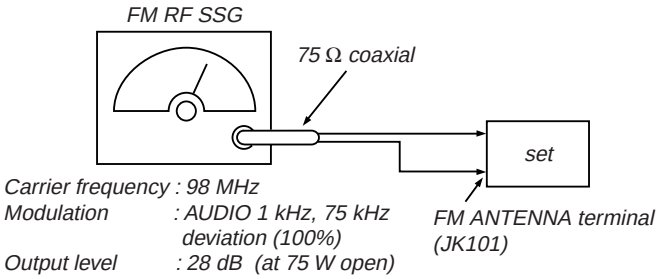
Procedure:

1. Tune the set to 600 kHz.
2. Set the output of AM RF SSG so that the input level of the set will become 60 dB (μV/m).
3. Adjust L104 so that when the waveform on the oscilloscope is maximum, no noise appears.
4. Tune the set to 1,400 kHz.
5. Adjust TC102 so that when the waveform on the oscilloscope is maximum, no noise appears.

- Repeat the procedures in each adjustment several times, and the tracking adjustment should be finally done by the trimmer capacitors.

Adjustment Location: MAIN board (See page 14)

FM Tuned Level Adjustment


FM RF SSG
75 Ω coaxial
set
Carrier frequency : 98 MHz
Modulation : AUDIO 1 kHz, 75 kHz deviation (100%)
Output level : 28 dB (at 75 W open)
FM ANTENNA terminal (JK101)

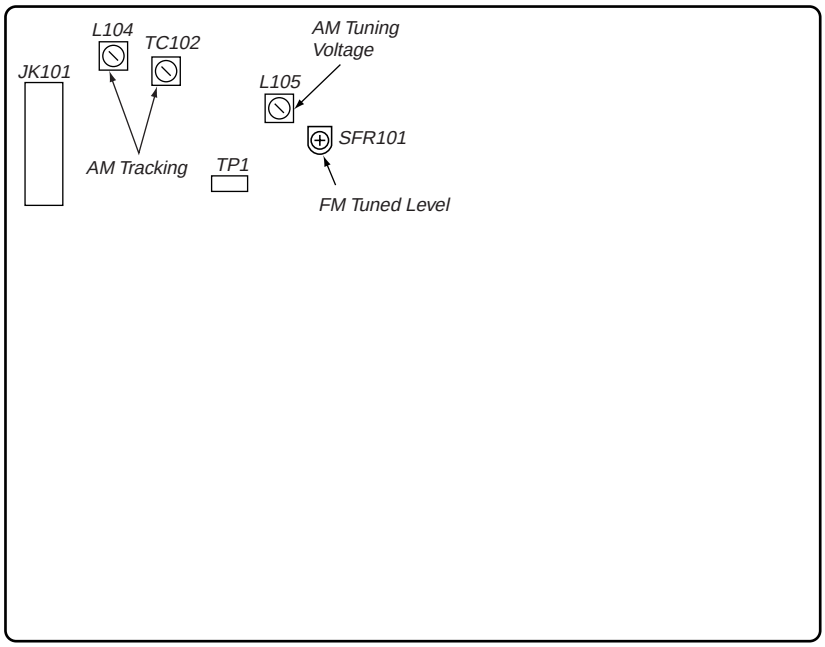
Procedure:

1. Supply a 28 dB 98 MHz signal from the ANTENNA terminal.
2. Tune the set to 98 MHz.
3. Adjust SFR101 to the point (moment) when the TUNED indicator will change from going off to going on.

Adjustment Location: MAIN board

Adjustment Location

[MAIN BOARD] — Component side —

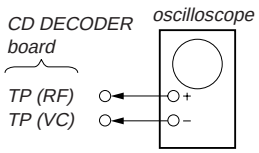


CD SECTION

Note:

1. CD Block is basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Adjust the focus bias adjustment when optical block is replaced.

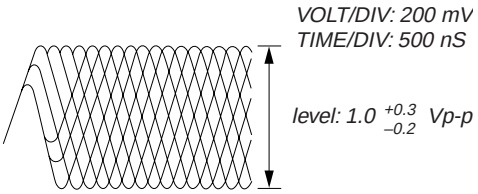
RF Level Check



Procedure :

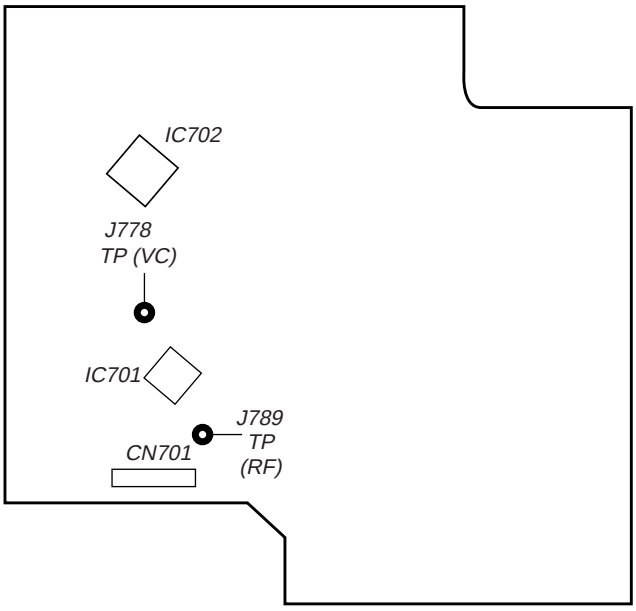
1. Connect oscilloscope to test point TP (RF) on CD DECODER board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note: Clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.



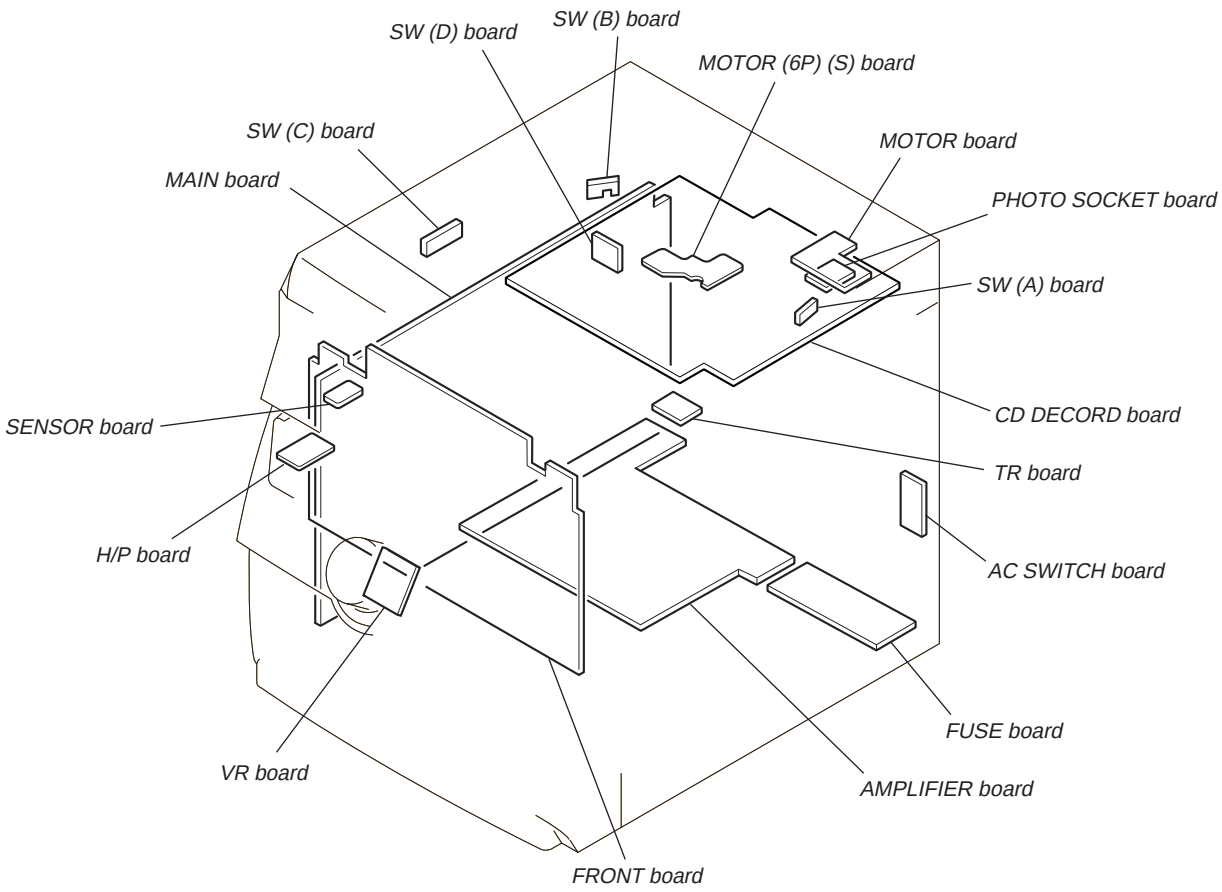
Adjustment Location:

[CD DECODER BOARD] — Component side —

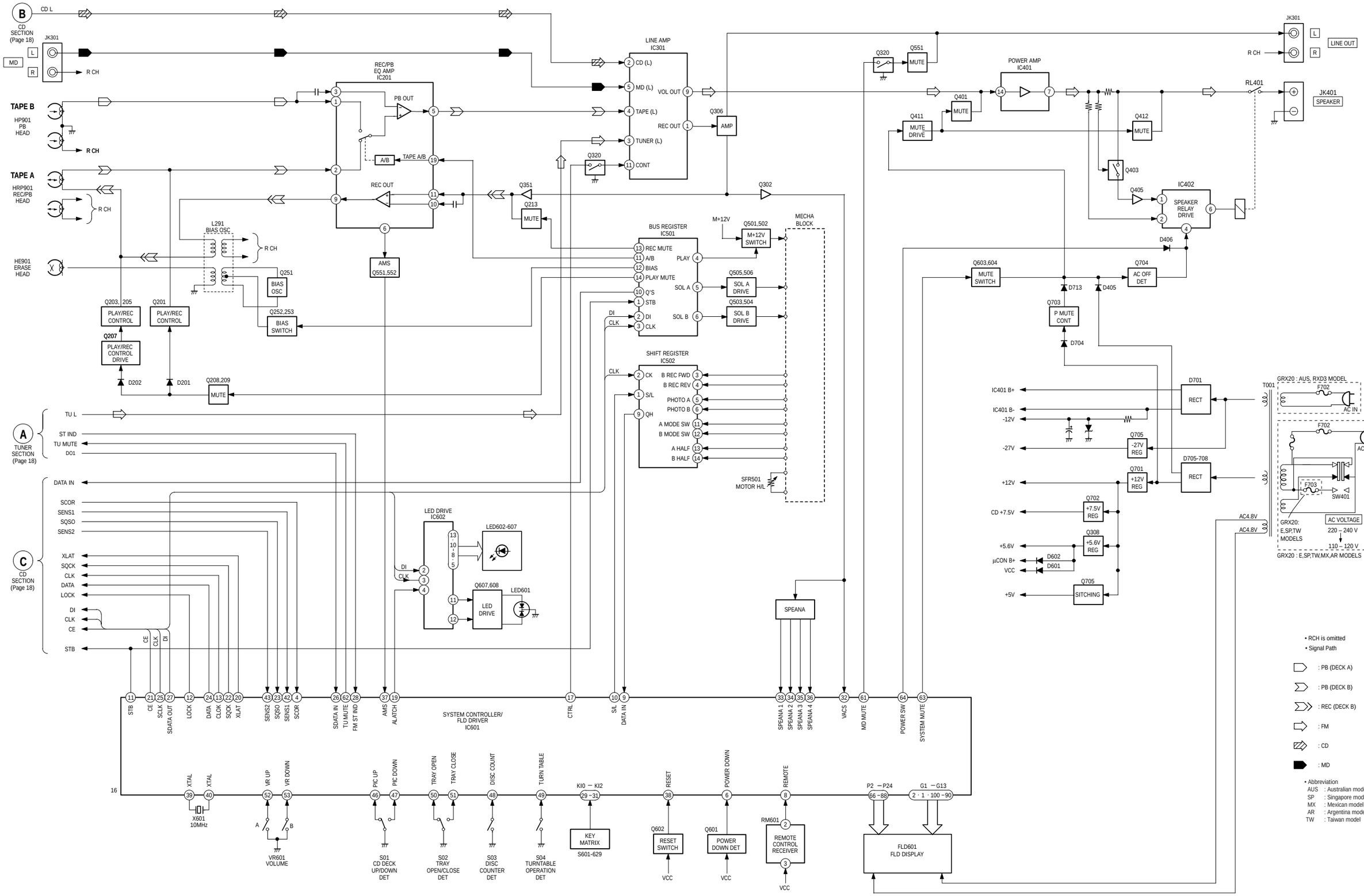


SECTION 6
DIAGRAMS

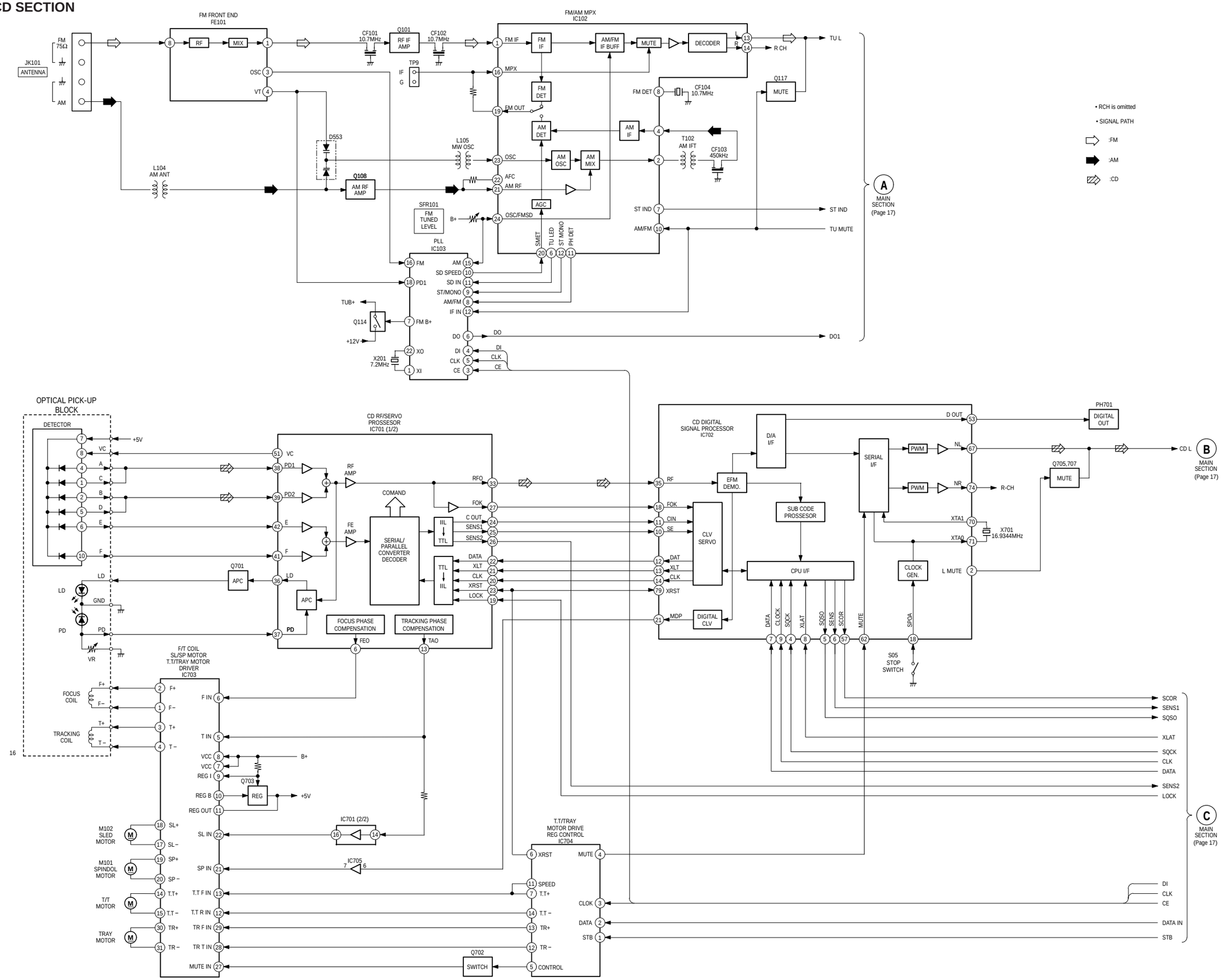
6-1. CIRCUIT BOARDS LOCATION



6-2. BLOCK DIAGRAMS
MAIN SECTION



TUNER/CD SECTION



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this necessary note is printed in each block.)

For schematic diagrams.
Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.

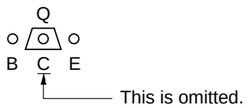
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line.
- B− : B– Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
  - : FM
  - : AM
  - : PB (DECK A)
  - : PB (DECK B)
  - : REC (DECK B)
  - : CD
- Abbreviation
  - AUS : Australian model
  - SP : Singapore model
  - MX : Mexican model
  - AR : Argentina model
  - TW : Taiwan model

For printed wiring boards.
Note:

- ○——— : parts extracted from the component side.
- ○ : Through hole.
- △ : internal component.
- ▒▒ : Pattern from the side which enables seeing.

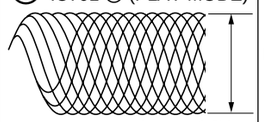
- Indication of transistor.



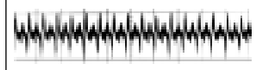
• WAVEFORM

— BD SECTION —

① IC701 ㉝ (PLAY MODE)

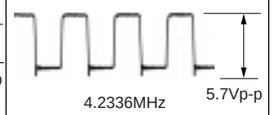


⑤ IC702 ㊾ (B) GFS (PLAY MODE)



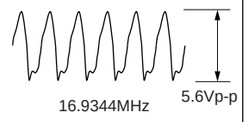
② IC701 ② (FEI) (PLAY MODE)

⑥ IC702 ㊷ (A) C4M

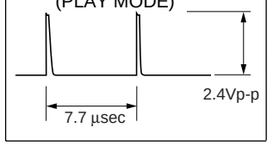


③ IC701 ㊼ (TEI) (PLAY MODE)

⑦ IC702 ㉛ (XTAO)

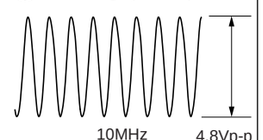


④ IC703 ㉗ (MDP) (PLAY MODE)



— PANEL SECTION —

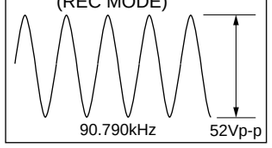
⑧ IC601 ㊵ (X' TAL)



— MAIN SECTION —

⑨ IC103 ㉒ (X OUT)

⑩ L251 ⑦ (REC MODE)

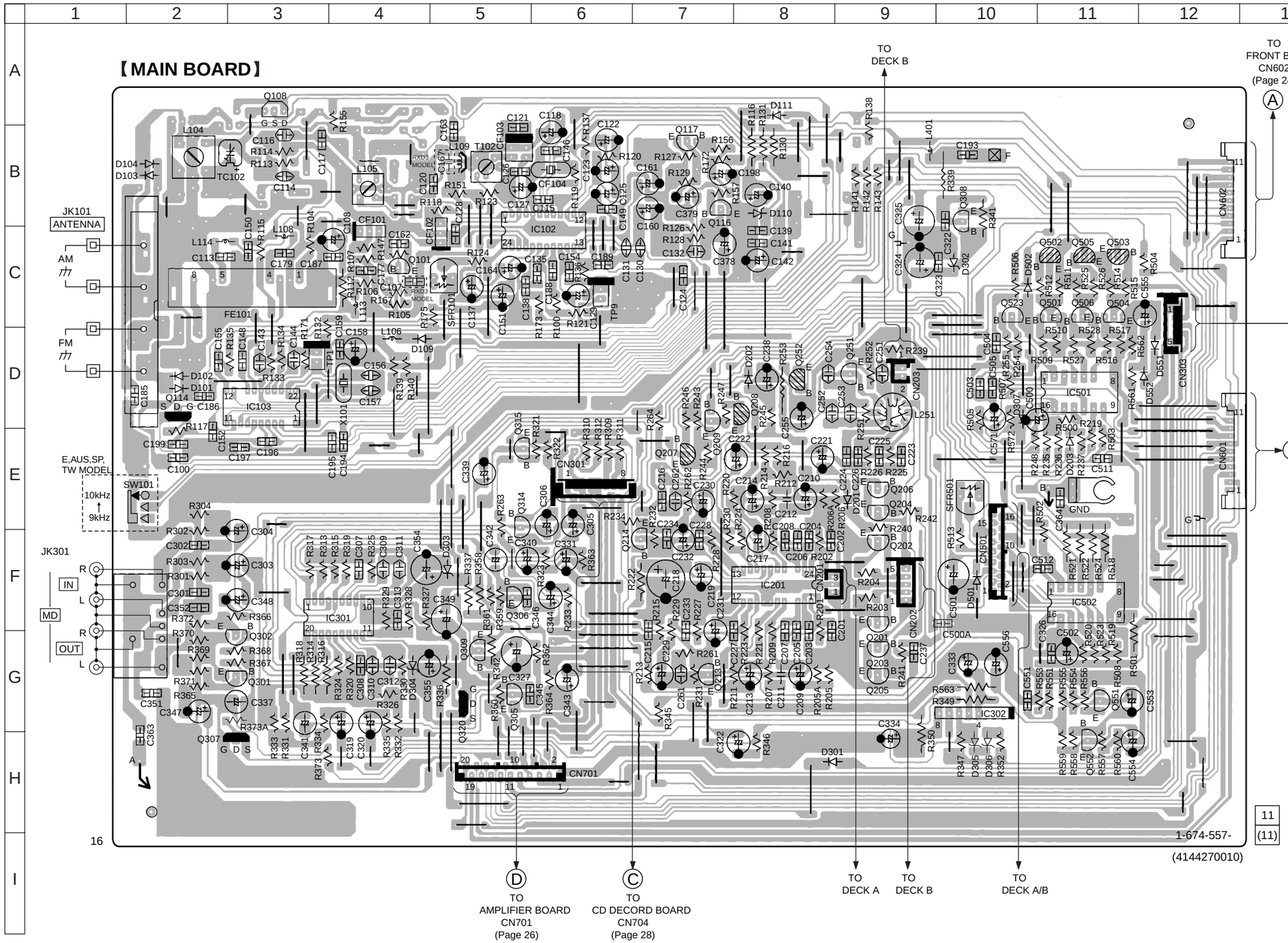


6-3. PRINTED WIRING BOARD MAIN SECTION

• Refer to page 16 for Circit Boards Location. • Refer to page 19 for Note on Printed Wiring Board.

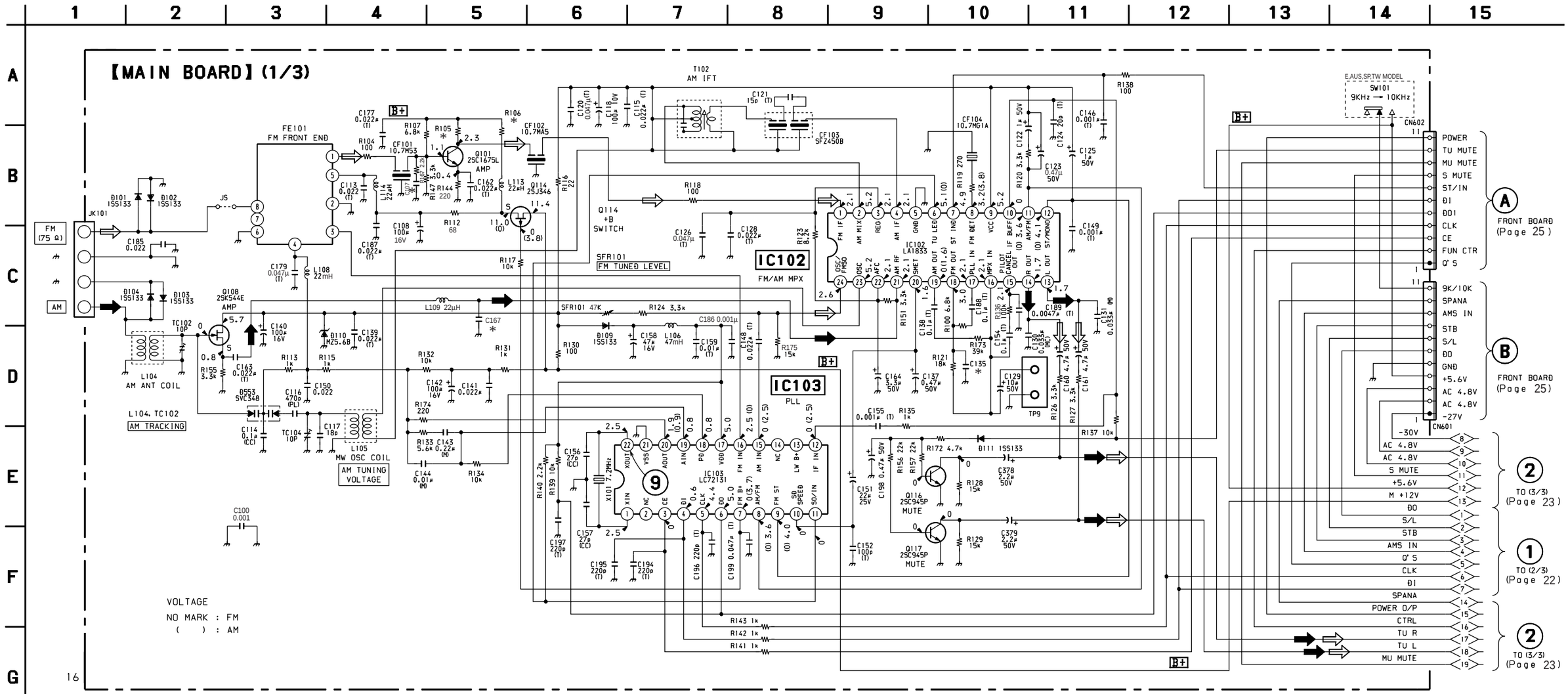
• **Semiconductor Location**

Ref. No.	Location
D101	D-2
D102	D-2
D103	B-2
D104	B-2
D109	D-4
D110	B-8
D111	A-8
D201	E-9
D202	D-8
D203	E-11
D301	H-8
D302	C-10
D303	F-5
D304	G-4
D305	H-10
D306	H-10
D307	D-10
D501	F-10
D502	C-10
D551	D-12
D552	D-12
IC102	B-6
IC103	D-3
IC201	F-8
IC301	D-3
IC302	G-10
IC501	D-11
IC502	F-11
Q101	C-4
Q108	A-3
Q114	D-2
Q116	B-7
Q117	B-7
Q201	G-9
Q202	F-9
Q203	G-9
Q204	E-9
Q205	G-9
Q206	E-9
Q207	E-7
Q208	D-8
Q209	D-7
Q213	G-7
Q214	F-7
Q251	D-9
Q252	D-8
Q301	G-3
Q302	G-3
Q305	G-5
Q306	F-5
Q307	H-3
Q308	B-10
Q309	G-5
Q314	E-5
Q315	E-5
Q320	G-5
Q501	C-11
Q502	C-11
Q503	C-11
Q504	C-11
Q505	C-11
Q506	C-11
Q523	C-10
Q551	G-11
Q552	H-11



6-4. SCHEMATIC DIAGRAM MAIN (1/3) SECTION

• Refer to page 19 for Waveforms. • Refer to page 33 for IC Block Diagrams. • Refer to page 19 for Note on Schematic Diagram.

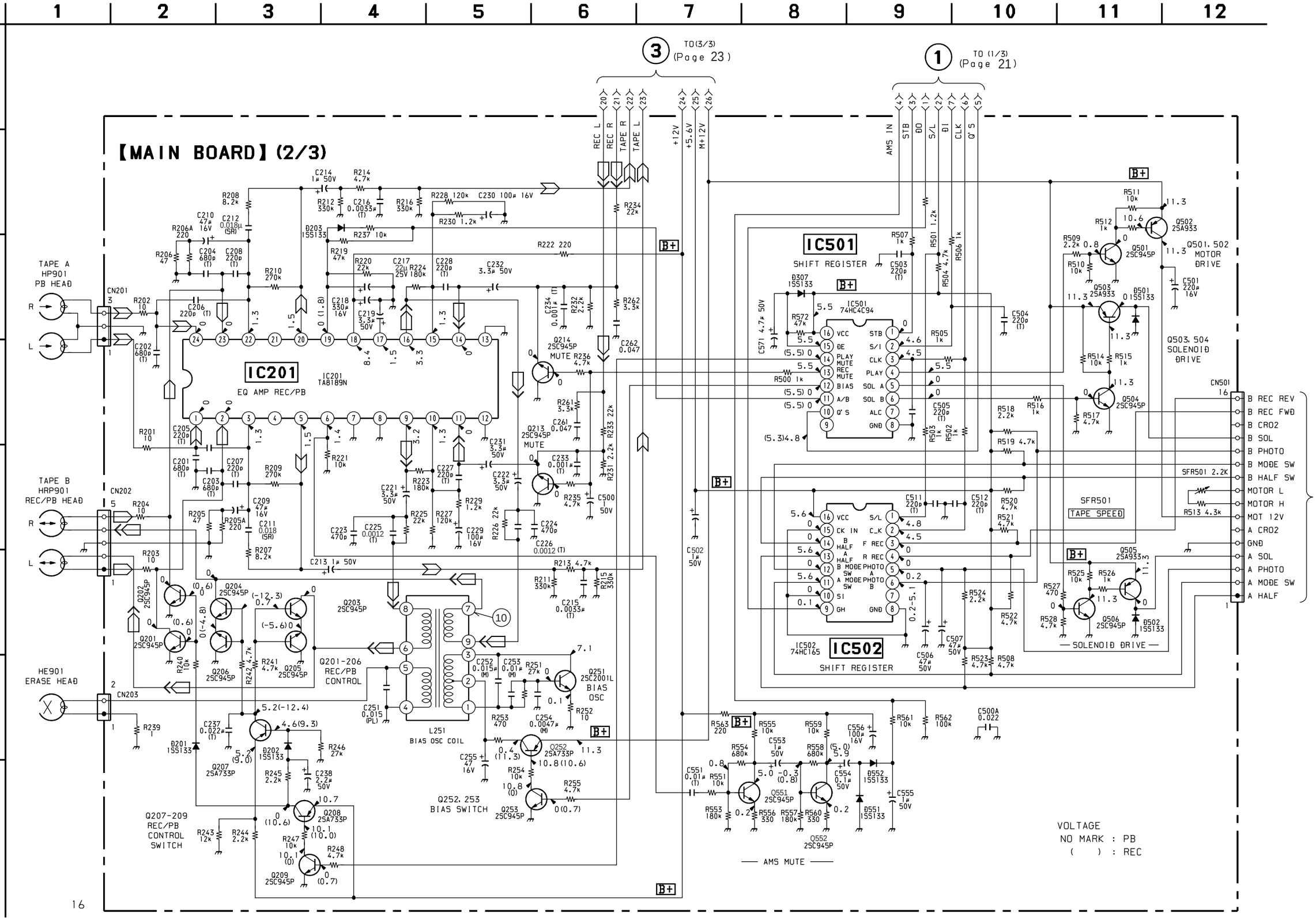


* MARK :

	C107	C135	C167	R105	R106
GRX20	NO MOUNT	0.022(T)	NO MOUNT	220	5.6k
RXD3	0.01µ	560p(T)	10p	1k	100

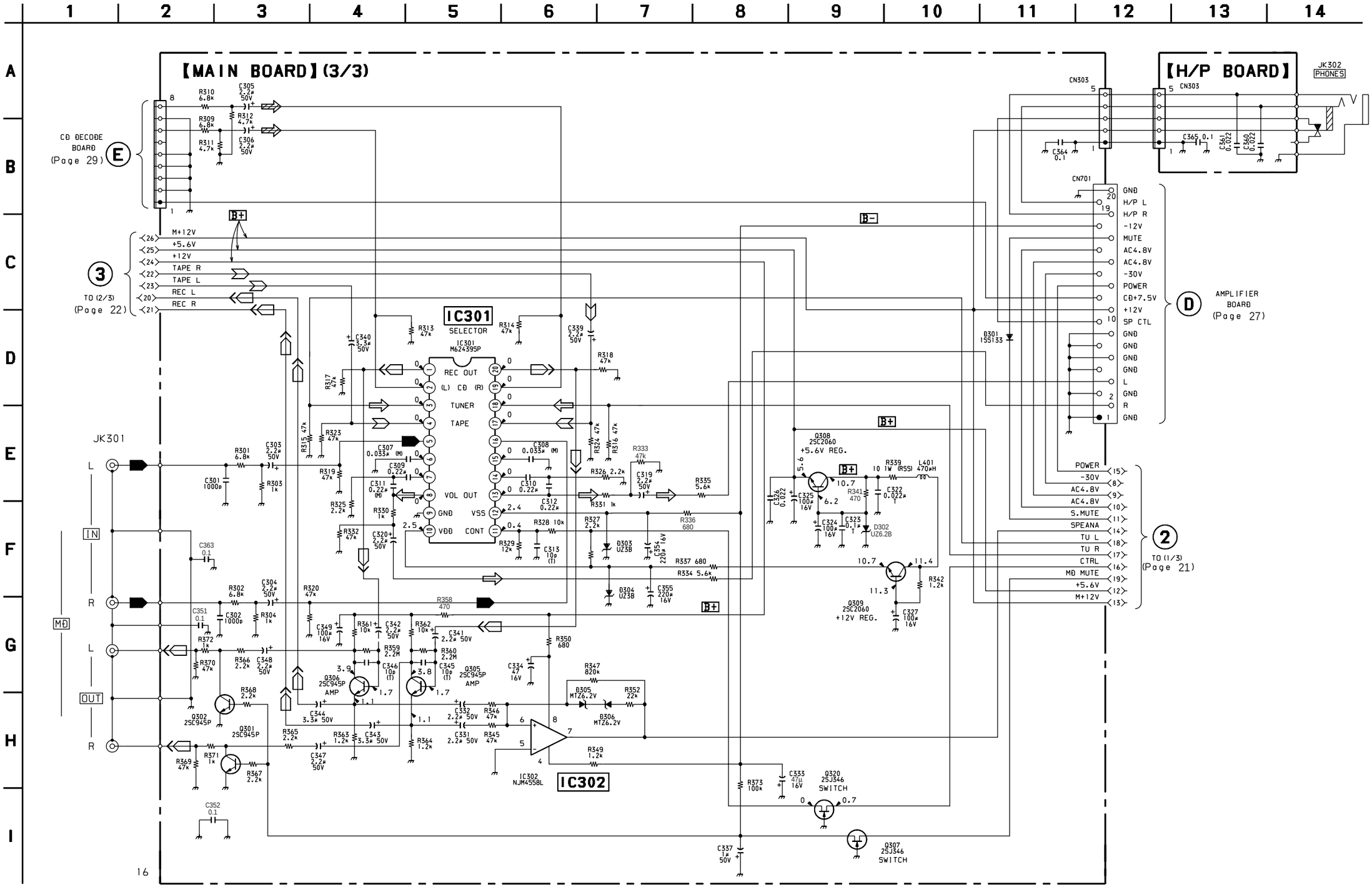
6-5. SCHEMATIC DIAGRAM MAIN (2/3) SECTION

• Refer to page 19 for Waveforms. • Refer to page 33 for IC Block Diagrams. • Refer to page 19 for Note on Schematic Diagram.



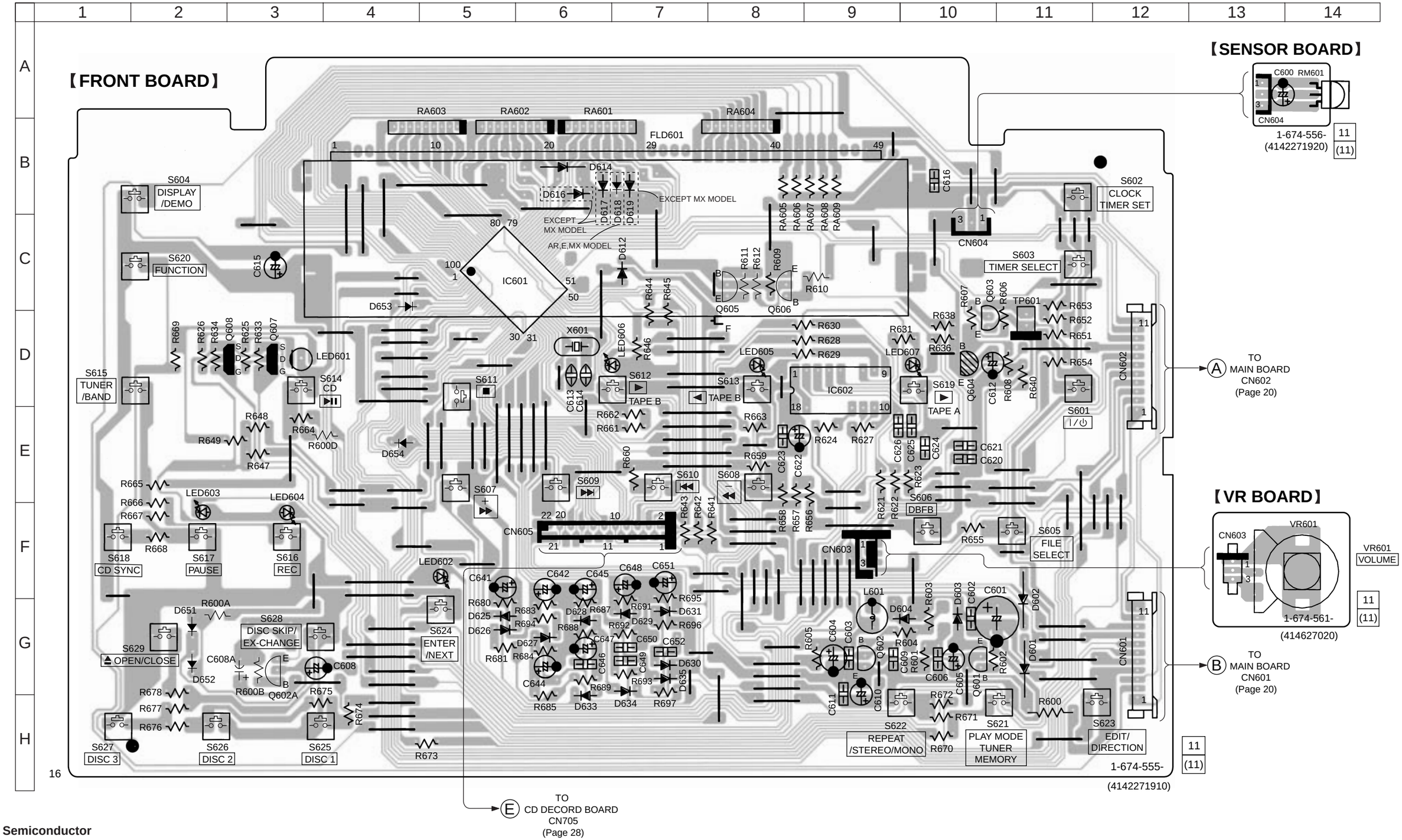
6-6. SCHEMATIC DIAGRAM MAIN (3/3) SECTION

• Refer to page 33 for IC Block Diagrams. • Refer to page 19 for Note on Schematic Diagram.



6-7. PRINTED WIRING BOARD FRONT PANEL SECTION

• Refer to page 16 for Circuit Boards Location. • Refer to page 19 for Note on Printed Wiring Board.

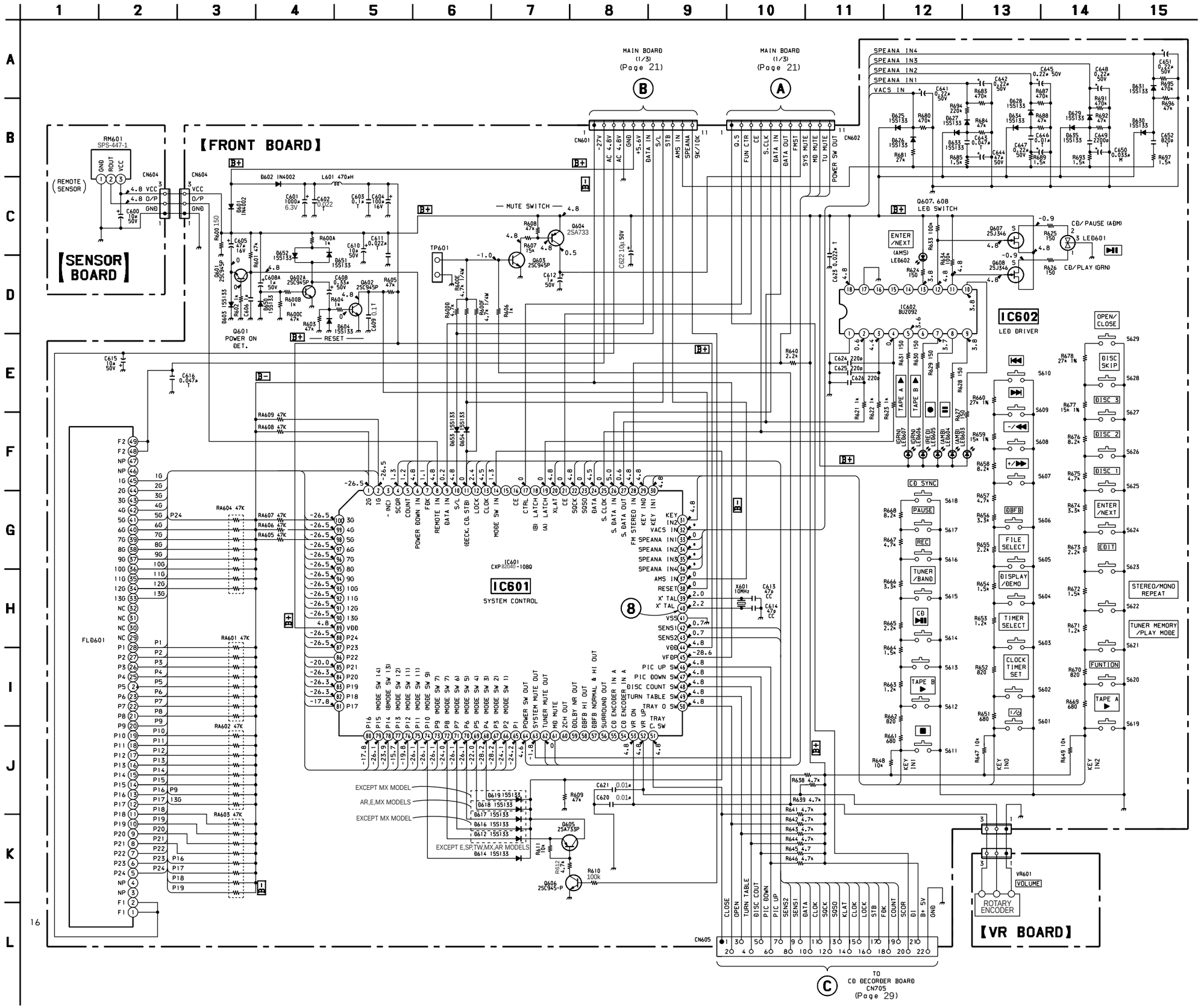


• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D601	G-11	D615	B-6	D623	B-5	D633	H-6	IC601	C-5	Q605	C-8
D602	G-11	D616	B-6	D625	G-5	D634	G-7	IC602	D-9	Q606	C-8
D603	G-10	D617	B-6	D626	G-5	D635	G-7			Q607	D-3
D604	G-10	D618	B-6	D627	G-6	D651	G-2	Q601	G-10	Q608	D-3
D611	B-5	D619	B-7	D628	G-6	D652	G-2	Q602	G-9		
D612	C-7	D620	B-7	D629	G-7	D653	C-4	Q602A	G-3		
D613	B-5	D621	B-7	D630	G-7	D654	E-4	Q603	D-10		
D614	B-6	D622	B-5	D631	G-7			Q604	D-10		

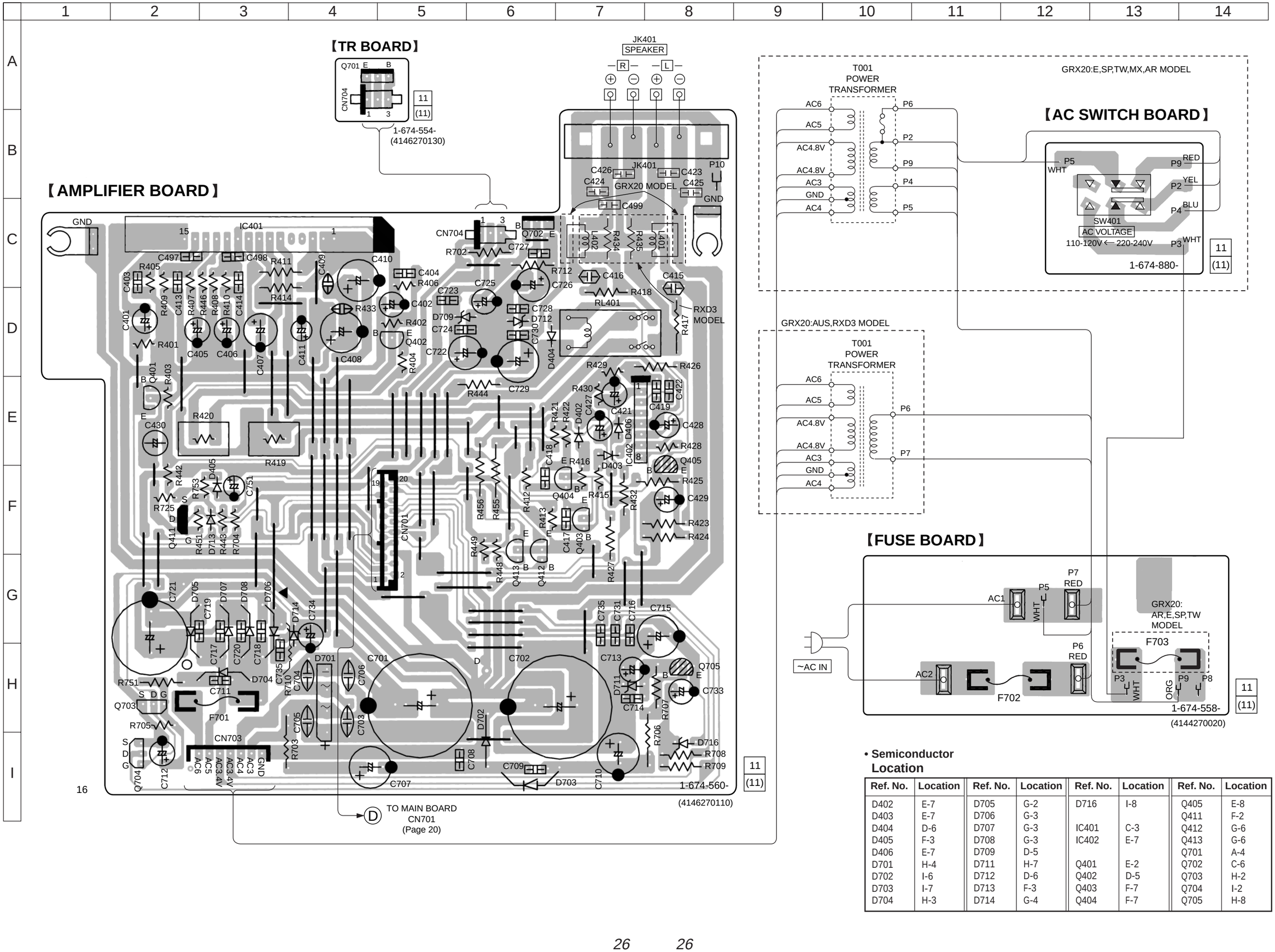
6-8. SCHEMATIC DIAGRAM FRONT PANEL SECTION

• Refer to page 19 for Waveforms. • Refer to page 30 for IC Pin Function. • Refer to page 19 for Note on Schematic Diagram.



6-9. PRINTED WIRING BOARD AMPLIFIER SECTION

• Refer to page 16 for Circuit Boards Location. • Refer to page 19 for Note on Printed Wiring Board.

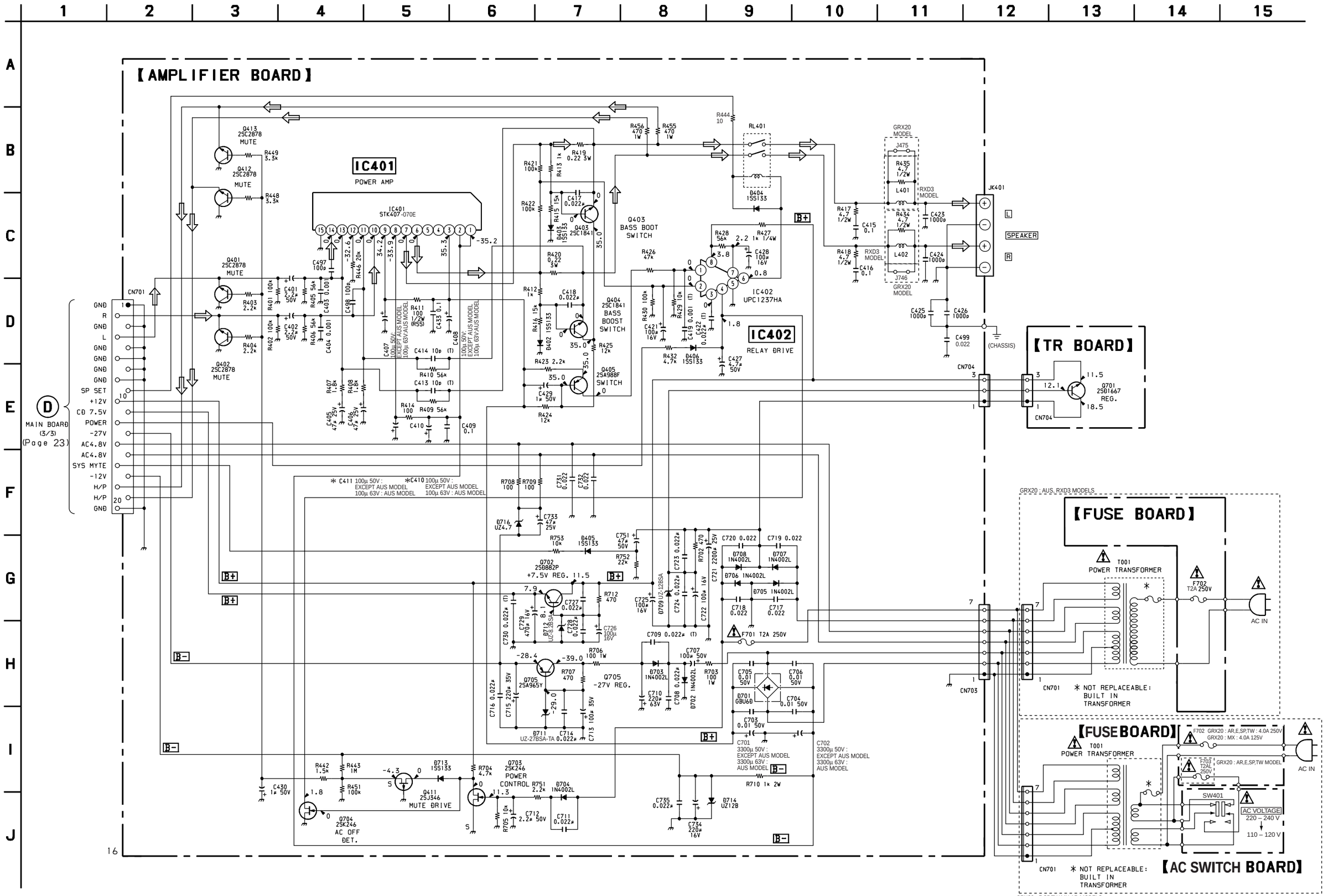


• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D402	E-7	D705	G-2	D716	I-8	Q405	E-8
D403	E-7	D706	G-3			Q411	F-2
D404	D-6	D707	G-3	IC401	C-3	Q412	G-6
D405	F-3	D708	G-3	IC402	E-7	Q413	G-6
D406	E-7	D709	D-5			Q701	A-4
D701	H-4	D711	H-7	Q401	E-2	Q702	C-6
D702	I-6	D712	D-6	Q402	D-5	Q703	H-2
D703	I-7	D713	F-3	Q403	F-7	Q704	I-2
D704	H-3	D714	G-4	Q404	F-7	Q705	H-8

6-10. SCHEMATIC DIAGRAM AMPLIFIER SECTION

• Refer to page 19 for Note on Schematic Diagram.

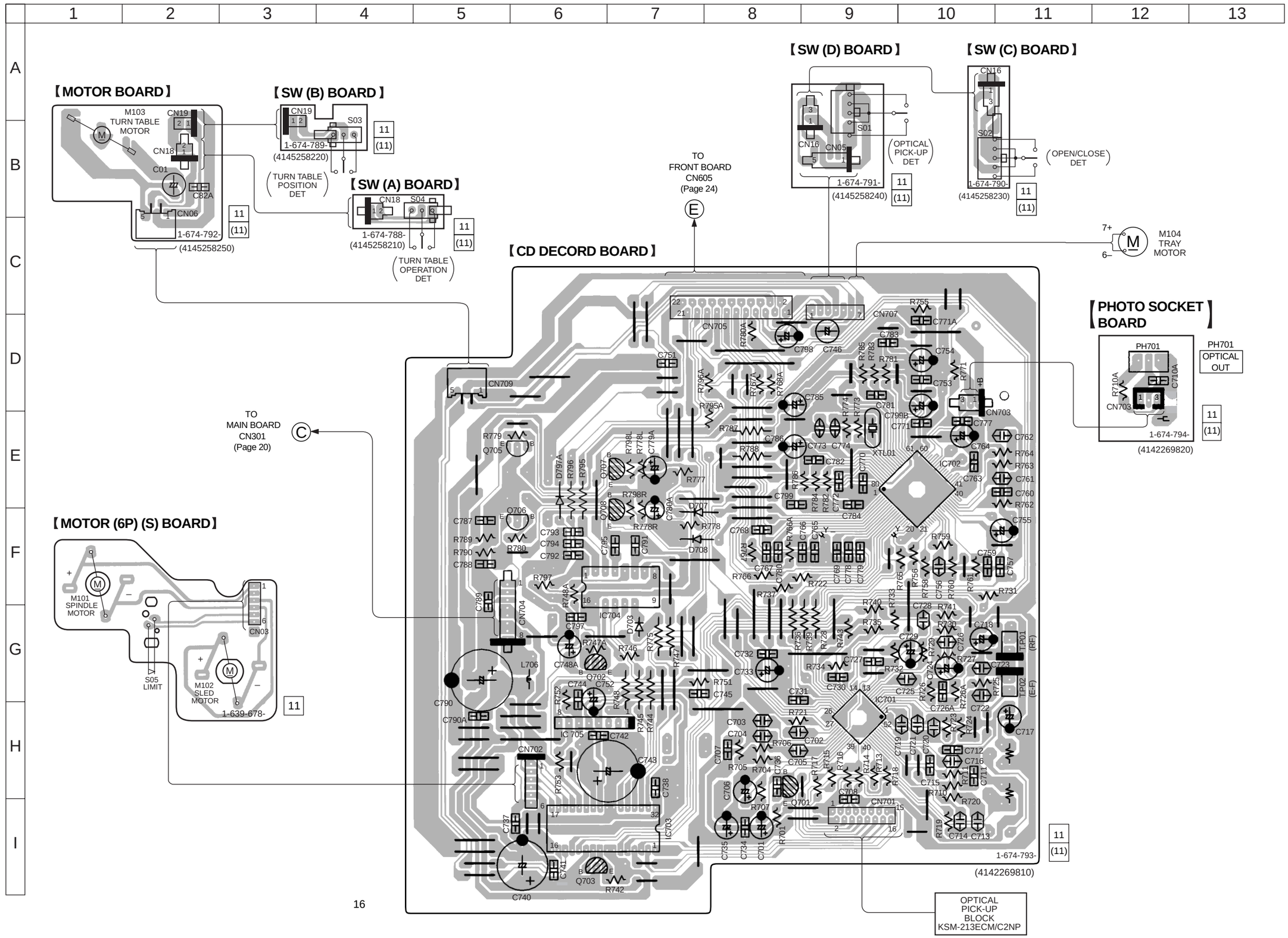


6-11. PRINTED WIRING BOARD CD SECTION

• Refer to page 16 for Circuit Boards Location. • Refer to page 19 for Note on Printed Wiring Board.

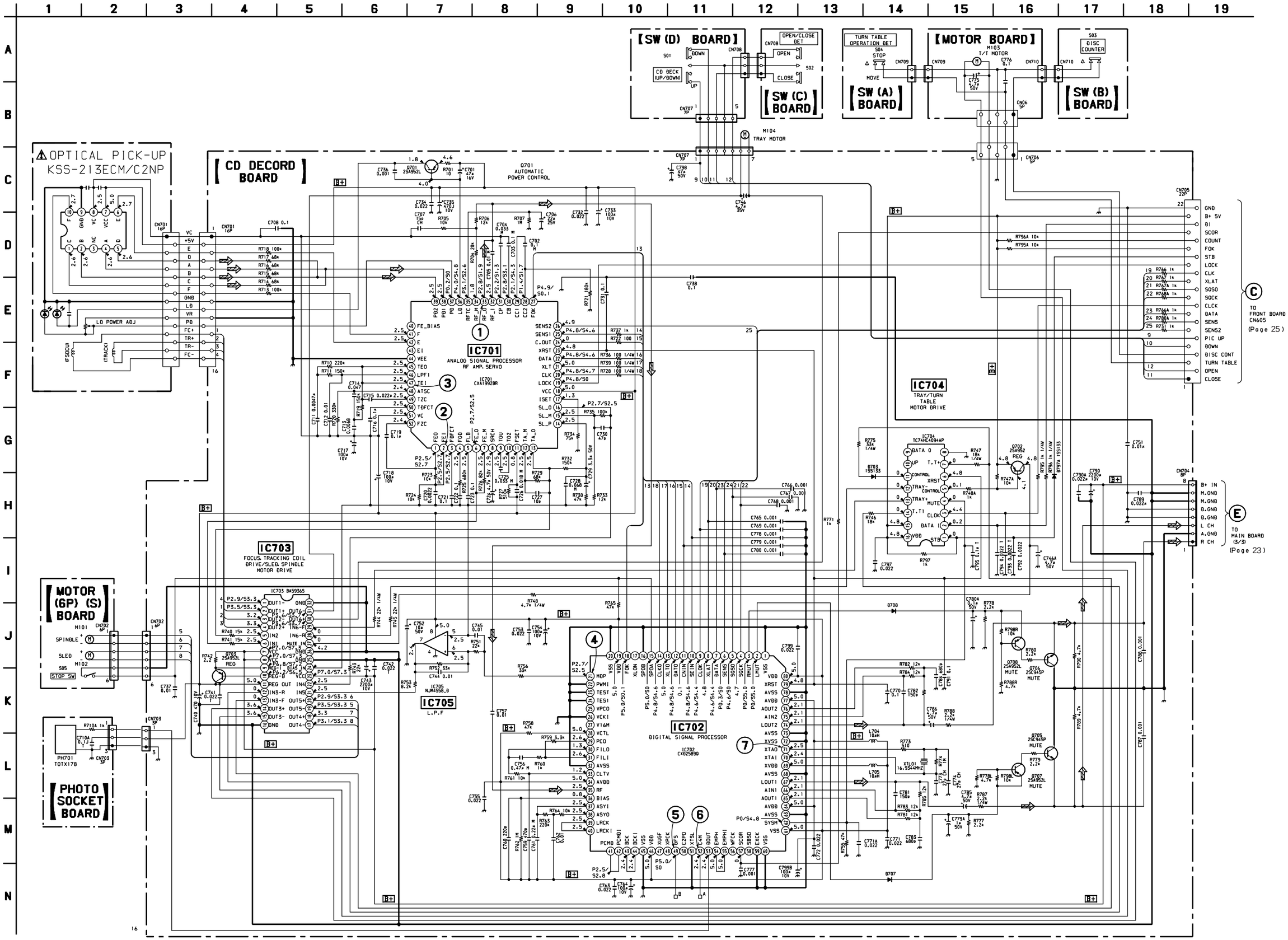
• Semiconductor Location

Ref. No.	Location
D703	G-7
D707	E-7
D708	F-7
D797A	E-6
IC701	H-9
IC702	E-10
IC703	I-7
IC704	F-7
IC705	H-6
Q701	H-8
Q702	G-6
Q703	I-6
Q705	E-6
Q706	F-6
Q707	E-7
Q708	E-7



6-12. SCHEMATIC DIAGRAM CD SECTION

• Refer to page 19 for Waveforms. • Refer to page 31,32 for IC Block Diagrams. • Refer to page 19 for Note on Schematic Diagram.



6-13. IC PIN FUNCTION

IC601 CXP82040-108Q(SYSTEM CONTROL) FRONT BOARD

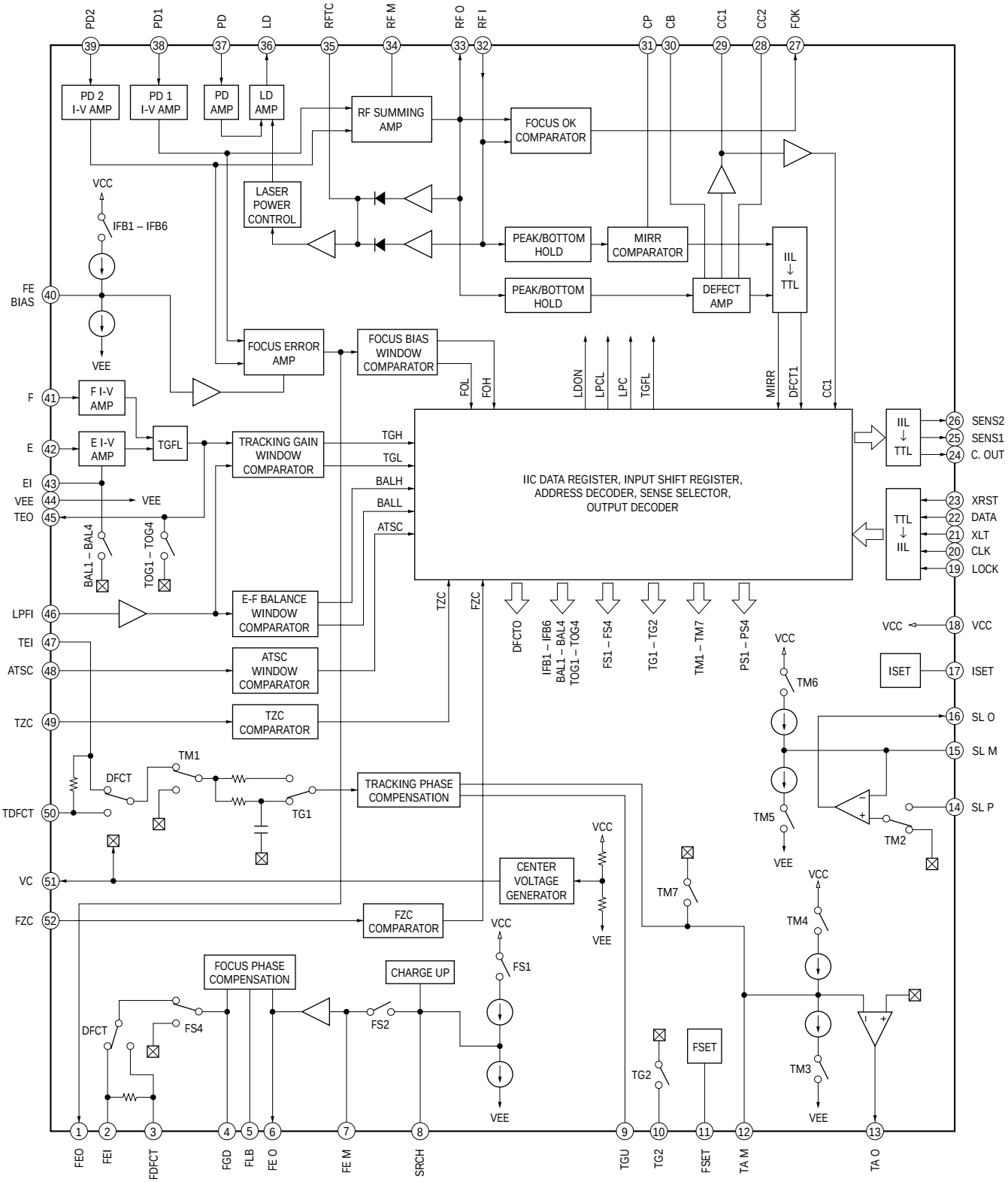
Pin No.	Pin Name	I/O	Description
1,2	2G,1G	O	FLD grid output.
3	NC	—	Not used.
4	SCOR	I	CXD2589Q SCOR input.
5	COUNT	I	CXD2589Q COUNT input.
6	POWER DOWN IN	I	Power data input.
7	FOK	I	FOK input.
8	REMOTE IN	I	Remote signal input.
9	DATA IN	I	Data input.(DECK secton)
10	S/L	O	S/L output.(DECK secton)
11	DECK,CD STB	O	STB output.(CD,DECK section)
12	LOCK	O	CXA1992BR LOCK output.
13	CLOCK	O	CXD2589Q CLOCK output.
14	MODE SW IN	O	Mode switch input.
15	NC	O	Not used.
16	CE	O	Not used.
17	CTRL	O	Function control output.
18	LATCH B	O	Not used.
19	LATCH A	O	LATCH output.
20	XLAT	O	CXD2589Q XLAT output.
21	CE	O	LC72131 CE output.
22	SQCK	O	CXD2589Q SQCK output.
23	SQSO	O	CXD2589Q SQSO output.
24	DATA	O	CXD2589Q DATA output.
25	S.CLOCK	O	S.CLOCK output.
26	S,DATA IN	I	S.DATA input.
27	S.DATA OUT	O	S.DATA output.
28	FM STEREO IN	I	FM Stereo input.
29 to 31	KEY IN O to 2	I	Key input 0 to 2.
32	VACS IN	I	Not used.
33 to 36	SPEANA IN 1 to 4	I	Not used.
37	ANS IN	I	AMS input.
38	RESET	I	RESET input.
39	EXTAL	—	X’TAL 10MHz
40	XTAL	—	X’TAL 10MHz
41	VSS	—	Ground.
42	SENS1	I	CXD2589Q SENS1 input.
43	SENS2	I	CXD2589Q SENS2 input.
44	VDD	—	VDD.
45	VFDP	—	VFDP.
46	PICK UP SW	I	Pick-up up switch signal input.
47	PICK DOWN SW	I	Pick-up down switch signal input.
48	DISC COUNT SW	I	Disc count switch signal input.
49	TURN TABLE SW	I	Turn Table switch signal input.
50	TRAY O. SW	I	Tray open switch signal input.
51	TRAY C. SW	I	Tray close switch signal input.
52	VR UP	I	Volume up signal input.
53	VR DN	I	Volume down signal input.
54	CD ENCODER IN A	I	Not used.
55	CD ENCODER IN B	I	Not used.
56	SURROUND OUT	O	Not used.
57	DBFB NOR&HI OUT	O	Not used.
58	DBFB HI OUT	O	Not used.
59	DOLBY NR OUT	O	Not used.
60	2CH OUT	O	Not used.
61	MD MUTE	O	Not used.
62	TUNER MUTE OUT	O	Tuner Mute output.
63	SYSTEM MUTE OUT	O	System Mute output.
64	POWER SW OUT	O	POWER switch output.
65	P1	O	FLD segment output.
66	P2(MODE SW 1)	O	FLD segment output. Mode switch 1.
67	P3(MODE SW 2)	O	FLD segment output. Mode switch 2.
68	P4(MODE SW 3)	O	FLD segment output. Mode switch 3.
69	P5(MODE SW 4)	O	FLD segment output. Mode switch 4.
70	P6(MODE SW 5)	O	FLD segment output. Mode switch 5.
71	P7(MODE SW 6)	O	FLD segment output. Mode switch 6.
72	P8(MODE SW 7)	O	FLD segment output. Mode switch 7.
73	P9(MODE SW 8)	O	FLD segment output. Mode switch 8.
74	P10(MODE SW 9)	O	FLD segment output. Mode switch 9.
75	P11(MODE SW 10)	O	FLD segment output. Mode switch 10.
76	P12(MODE SW 11)	O	FLD segment output. Mode switch 11.
77	P13(MODE SW 12)	O	FLD segment output. Mode switch 12.
78	P14(MODE SW 13)	O	FLD segment output. Mode switch 13.
79	P15(MODE SW 14)	O	FLD segment output. Mode switch 14.
80 to 85	P16 to 21	O	FLD segment output.
86	NC	—	Not used.
87,88	15G,14G	O	FLD grid output.
89	VDD	—	VDD.
90 to 100	13G to 3G	O	FLD grid output.

30

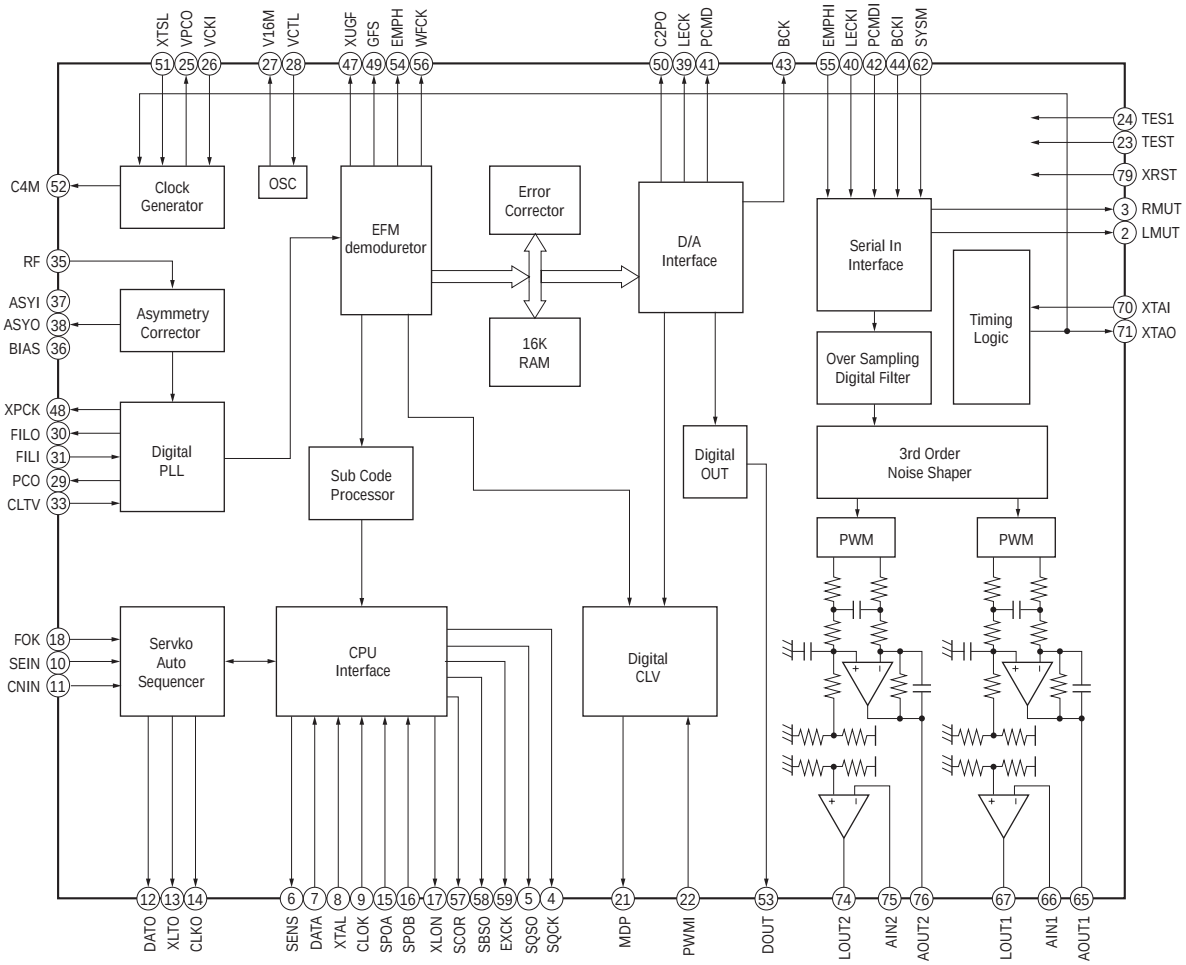
6-14. IC BLOCK DIAGRAMS

— CD DECORD SECTION —

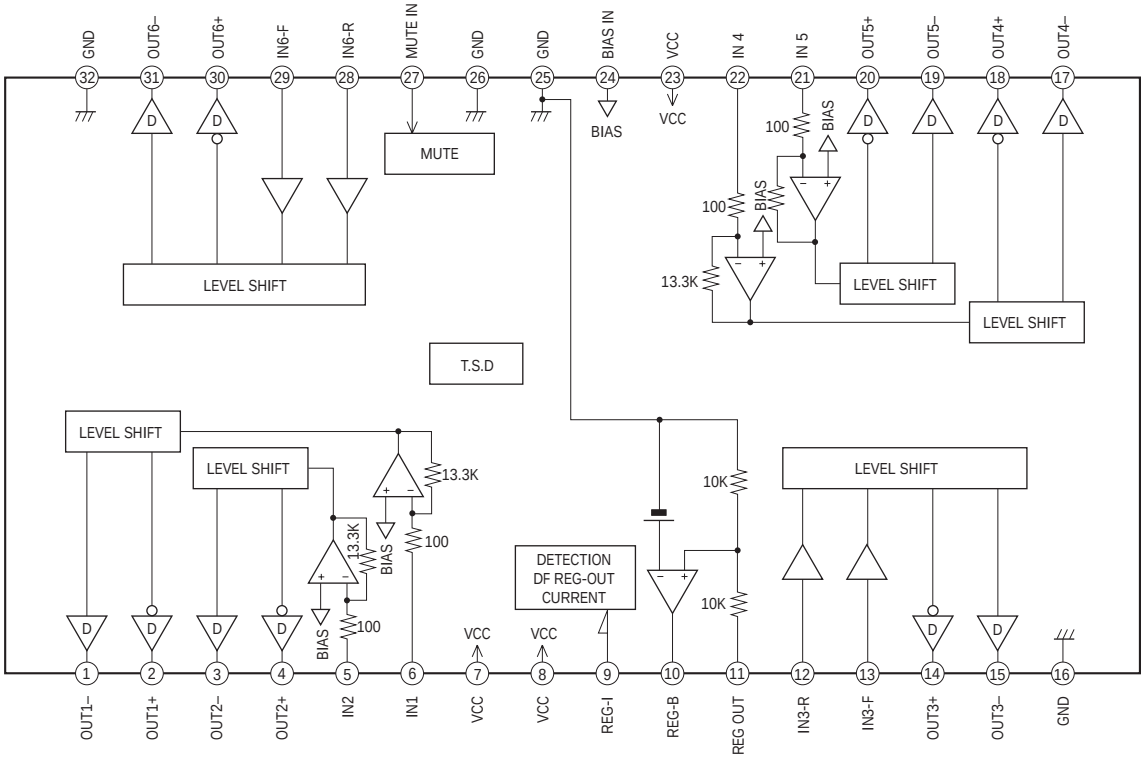
IC701 CXA1992BR



IC702 CXD2589Q

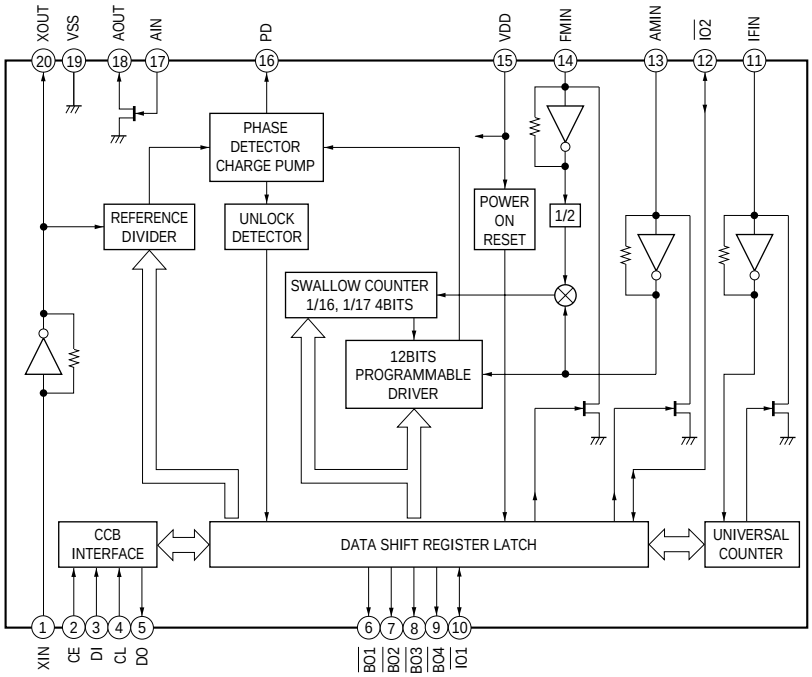


IC703 BA5936S

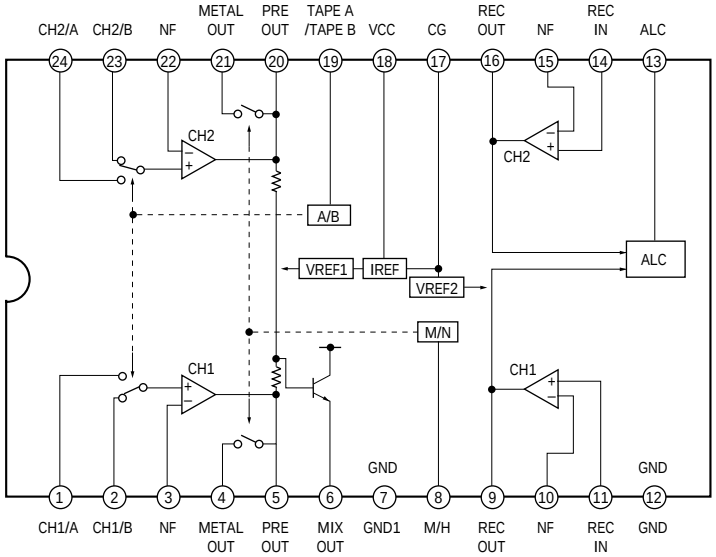


— MAIN BOARD —

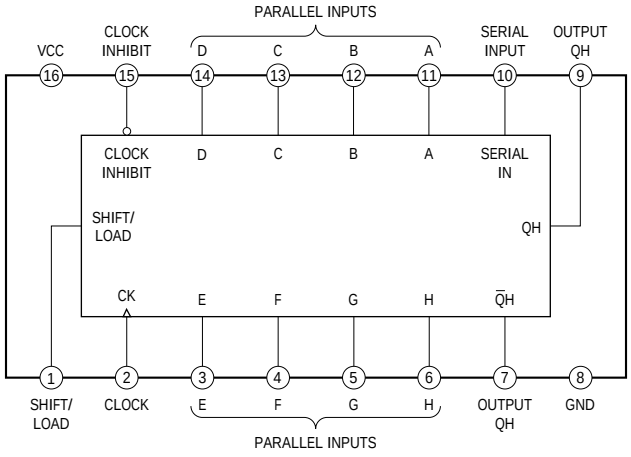
IC103 LC72131



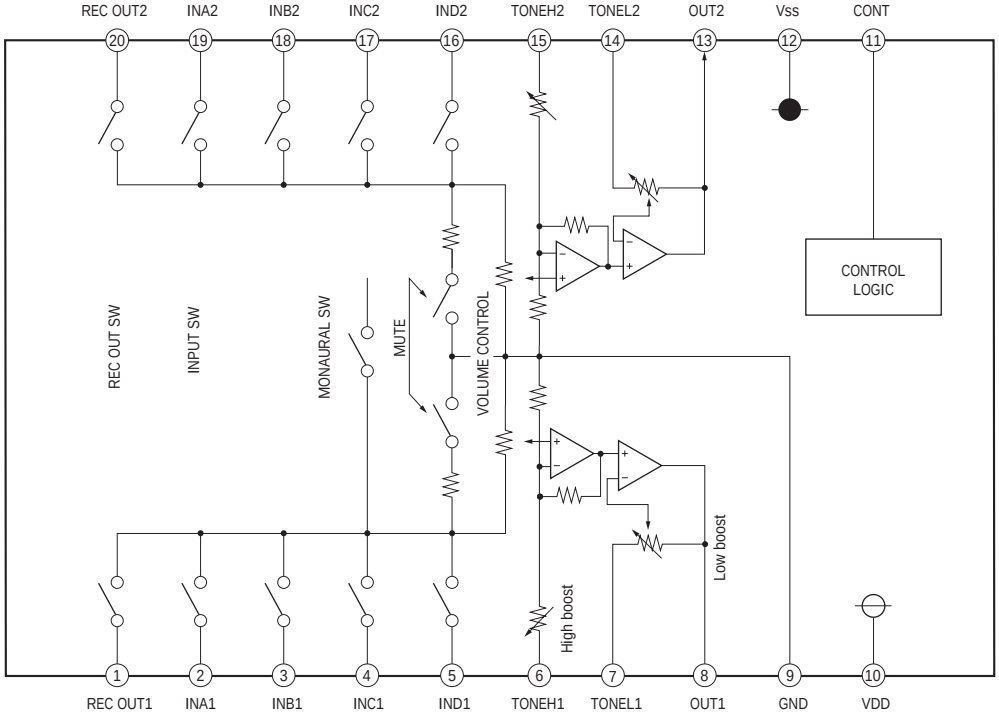
IC201 TA8189N



IC252 74HC165

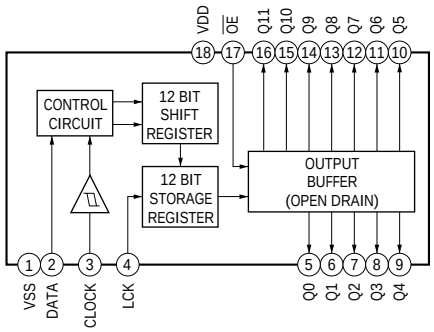


IC301 M62439SP



— FRONT BOARD —

IC602 BU2092



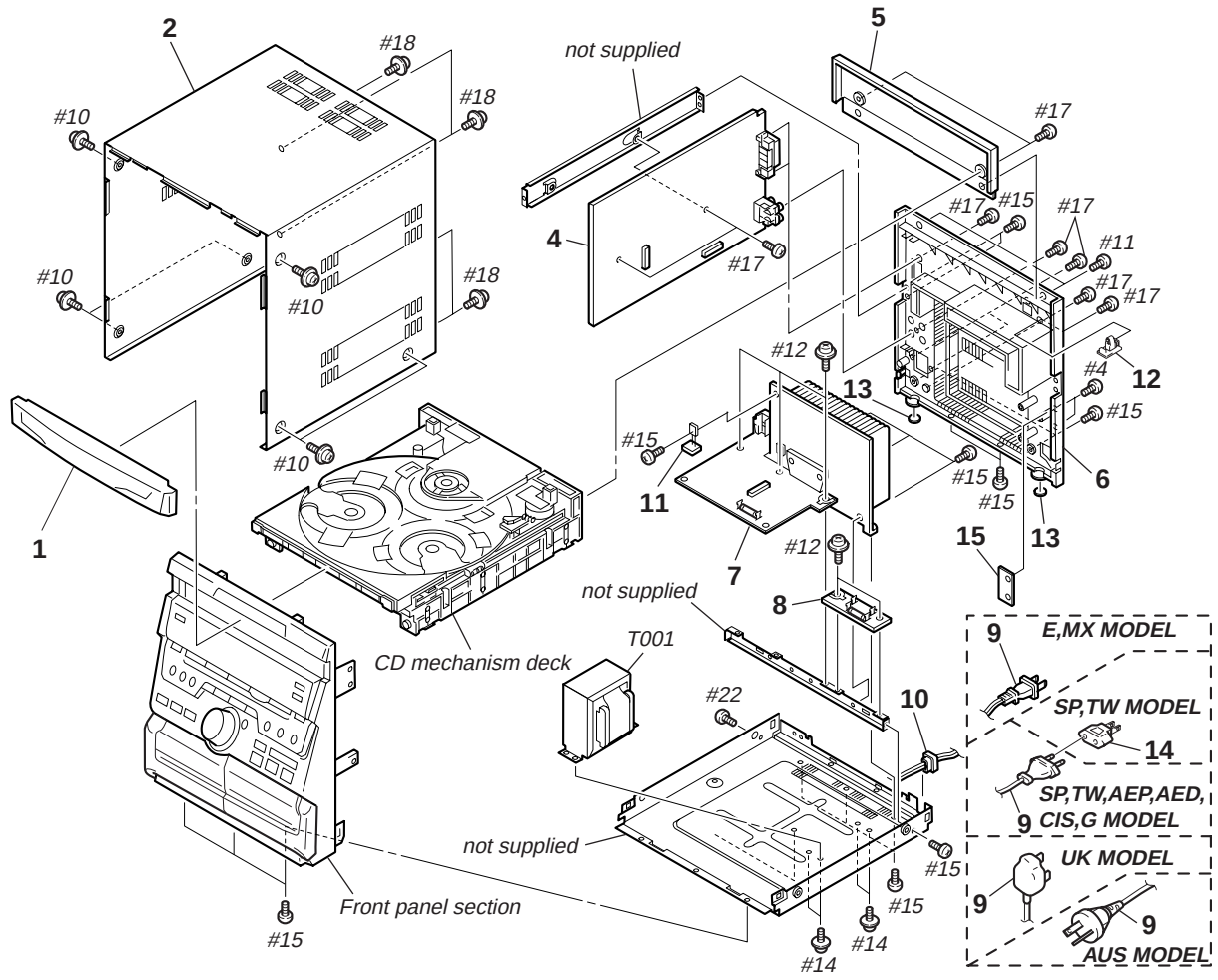
SECTION 7
EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  AUS : Australian model
  G : German model
  SP : Singapore model
  MX : Mexican model
  AR : Argentina model
  TW : Taiwan model
  AED : North European model

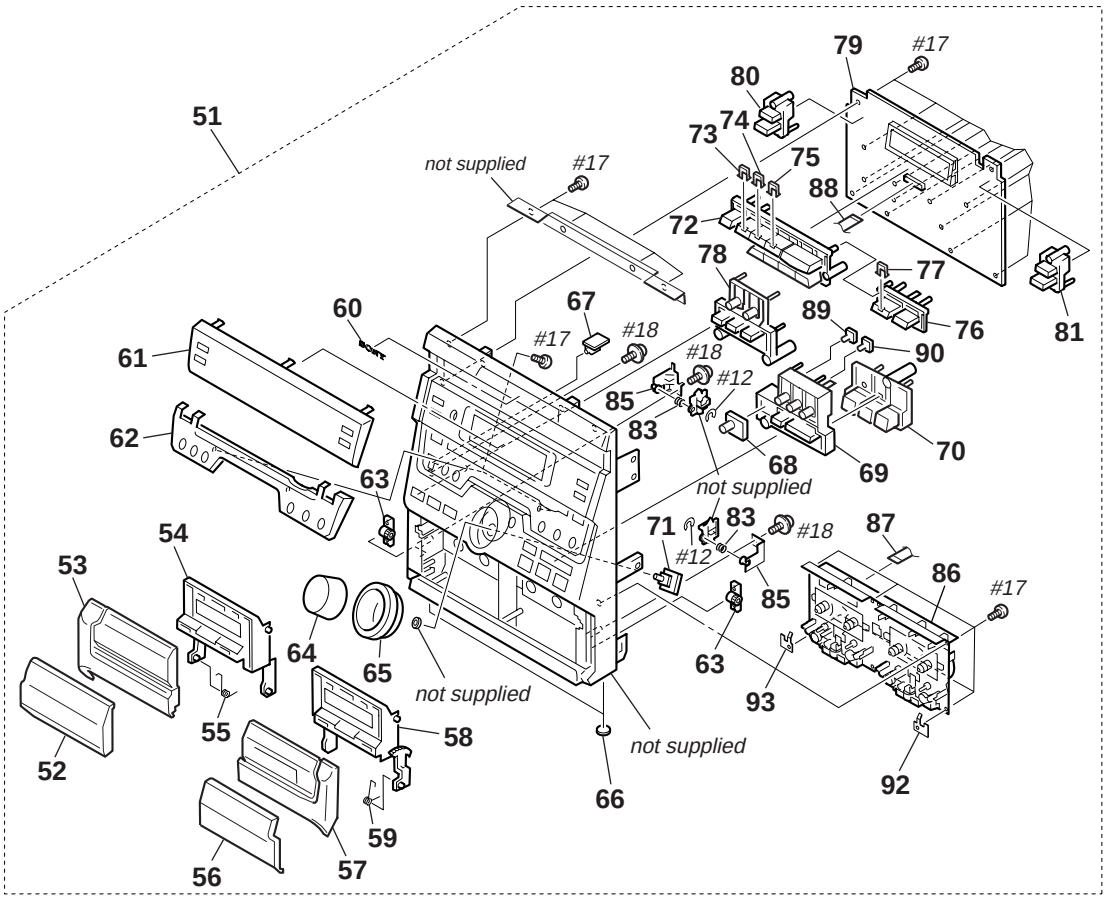
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

7-1. CABINET SECTION



Ref. No.	Part No.	Description	Remarks
1	4-220-797-01	DOOR,CD (RXD3)	
1	4-221-607-01	DOOR,CD (GRX20)	
2	4-220-799-01	COVER, TOP	
4	A-4426-302-A	MAIN BOARD ,COMPLETE (RXD3)	
4	A-4426-303-A	MAIN BOARD ,COMPLETE (GRX20)	
* 5	4-210-591-01	CABINET (A), REAR	
6	4-221-603-01	CABINET, REAR (RXD3)	
6	4-221-604-01	CABINET, REAR (GRX20:AUS)	
6	4-221-605-01	CABINET, REAR (GRX20:AR,E,SP,TW)	
6	4-221-606-01	CABINET, REAR (GRX20:MX)	
7	A-4426-292-A	AMPLIFIER BOARD ,COMPLETE (RXD3)	
7	A-4426-293-A	AMPLIFIER BOARD ,COMPLETE (GRX20:AUS)	
7	A-4426-294-A	AMPLIFIER BOARD ,COMPLETE (GRX20:AR,E,MX,SP,TW)	
8	1-674-558-11	FUSE BOARD	
⚠9	1-551-506-99	CORD, POWER (GRX20:E,MX)	
⚠9	1-555-795-00	CORD, POWER (GRX20:SP,TW/RXD3:AED,AEP,CIS,G)	
⚠9	1-696-572-21	CORD, POWER (RXD3:UK)	
⚠9	1-696-966-11	CORD, POWER (GRX20:AUS)	
⚠9	1-783-941-41	CORD, POWER (GRX20:AR)	
10	3-703-244-21	BUSHING, CORD	
11	1-674-554-11	TR BOARD	
12	1-674-794-11	PHOTO SOCKET BOARD	
13	4-220-602-01	RUBBER, FOOT	
⚠14	1-569-008-21	ADAPTOR, CONVERSION 2P (SP,TW)	
15	1-674-880-11	AC SWITCH BOARD (GRX20:AR,E,MX,SP,TW)	
⚠T001	1-433-917-11	TRANSFORMER, POWER (GRX20:MX)	
⚠T001	1-433-918-11	TRANSFORMER, POWER (RXD3)	
⚠T001	1-433-919-11	TRANSFORMER, POWER (GRX20:AR,E,SP,TW)	
⚠T001	1-433-920-11	TRANSFORMER, POWER (GRX20:AUS)	

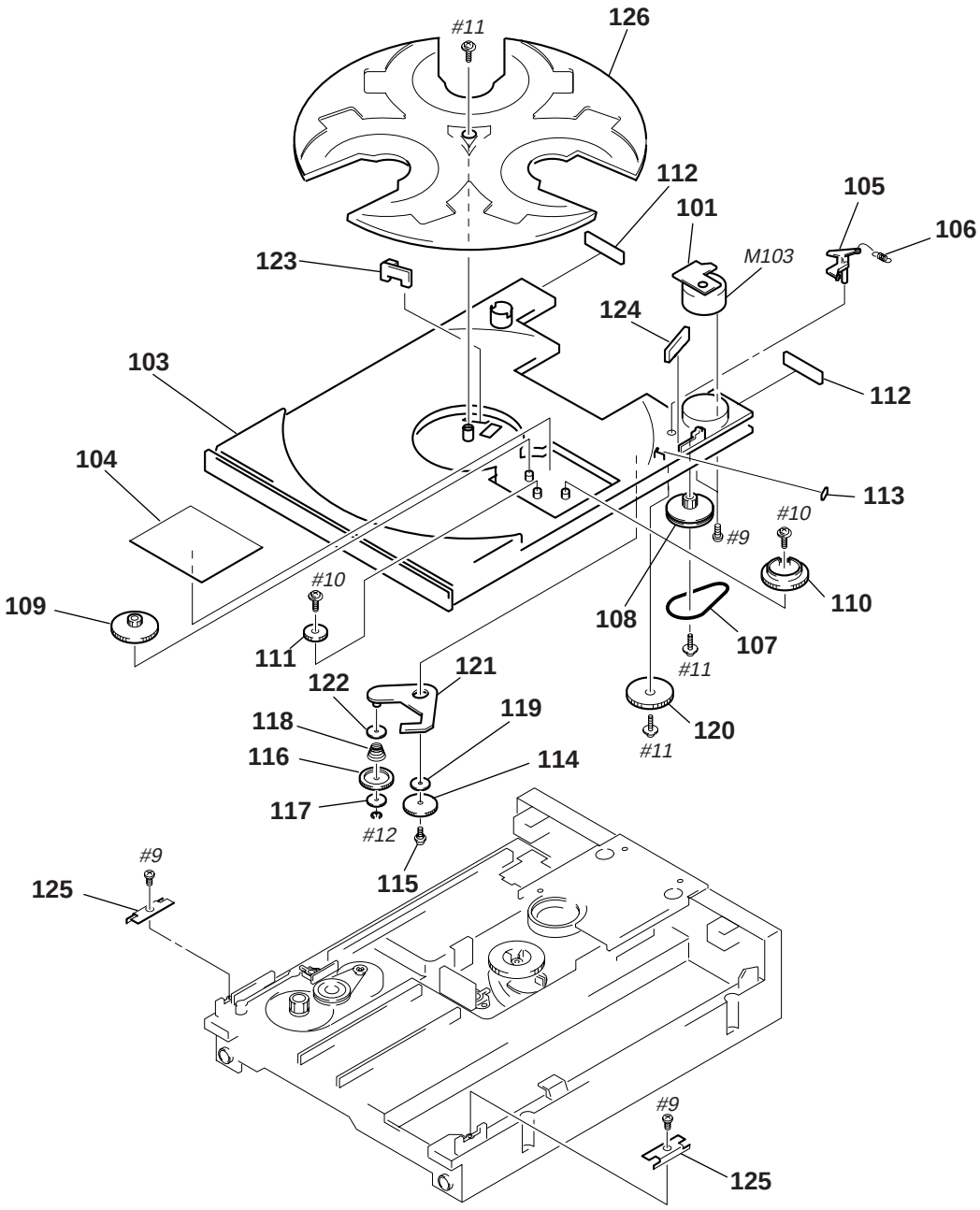
7-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remarks
51	A-4411-712-A	PANEL ASSY, FRONT (GRX20:AUS/RXD3)	
51	A-4411-741-A	PANEL ASSY, FRONT (GRX20:SP,TW)	
51	A-4411-739-A	PANEL ASSY, FRONT (GRX20:AR,E)	
51	A-4411-740-A	PANEL ASSY, FRONT (GRX20:MX)	
52	4-220-592-01	WINDOW (L), CASSETTE	
53	4-220-595-01	DOOR(L), CASSETTE	
54	4-220-626-01	HOLDER (L), CASSETTE	
55	4-220-623-01	SPRING (L), DOOR	
56	4-220-593-01	WINDOW (R), CASSETTE	
57	4-220-796-01	DOOR(R), CASSETTE	
58	4-220-627-01	HOLDER (R), CASSETTE	
59	4-220-624-01	SPRING (R), DOOR	
60	4-220-614-01	EMBLEM, LOGO	
61	4-220-605-01	WINDOW, DISPLAY	
62	4-220-804-01	COVER, FRONT	
63	4-220-622-01	DAMPER (GRY), GEAR	
64	4-220-594-01	KNOB, VOLUME	
65	4-220-621-01	RING, VOLUME	
66	4-220-602-01	RUBBER, FOOT	
67	1-674-559-11	H/P BOARD	
68	4-220-612-01	BUTTON, ENTER/NEXT	
69	4-220-611-01	BUTTON, CASS/REC	
70	4-220-610-01	BUTTON, DISC	

Ref. No.	Part No.	Description	Remarks
71	1-674-561-11	VR BOARD	
72	4-220-805-01	BUTTON, FUNCTION	
73	4-220-617-01	LENS(A), BUTTON	
74	4-220-618-01	LENS(B/L), BUTTON	
75	4-220-619-01	LENS(B/R), BUTTON	
76	4-220-806-01	BUTTON, TUNER	
77	4-220-807-01	LENS(CD), BUTTON	
78	4-220-609-01	BUTTON, FILE SELECT	
79	A-4426-056-A	FRONT BOARD ,COMPLETE(GRX20:AUS/RXD3)	
79	A-4426-289-A	FRONT BOARD ,COMPLETE (GRX20:AR,E)	
79	A-4426-290-A	FRONT BOARD ,COMPLETE (GRX20:MX)	
79	A-4426-291-A	FRONT BOARD ,COMPLETE (GRX20:SP,TW)	
80	4-220-616-01	BUTTON, CLOCK	
81	4-220-606-01	BUTTON, DISPLAY	
83	4-220-628-01	SPRING, EJECT LEVER	
85	4-220-629-01	LEVER, EJECT	
86	1-772-163-11	DECK, MECH	
87	1-783-579-11	WIRE(FLAT TYPE) (16 CORE)	
88	1-769-273-11	WIRE(FLAT TYPE) (22 CORE)	
89	4-220-613-01	BUTTON, REC	
90	4-220-615-01	LENS, PAUSE BUTTON	
92	4-220-811-01	SPRING (R), BUSHING	
93	4-220-810-01	SPRING (L), BUSHING	

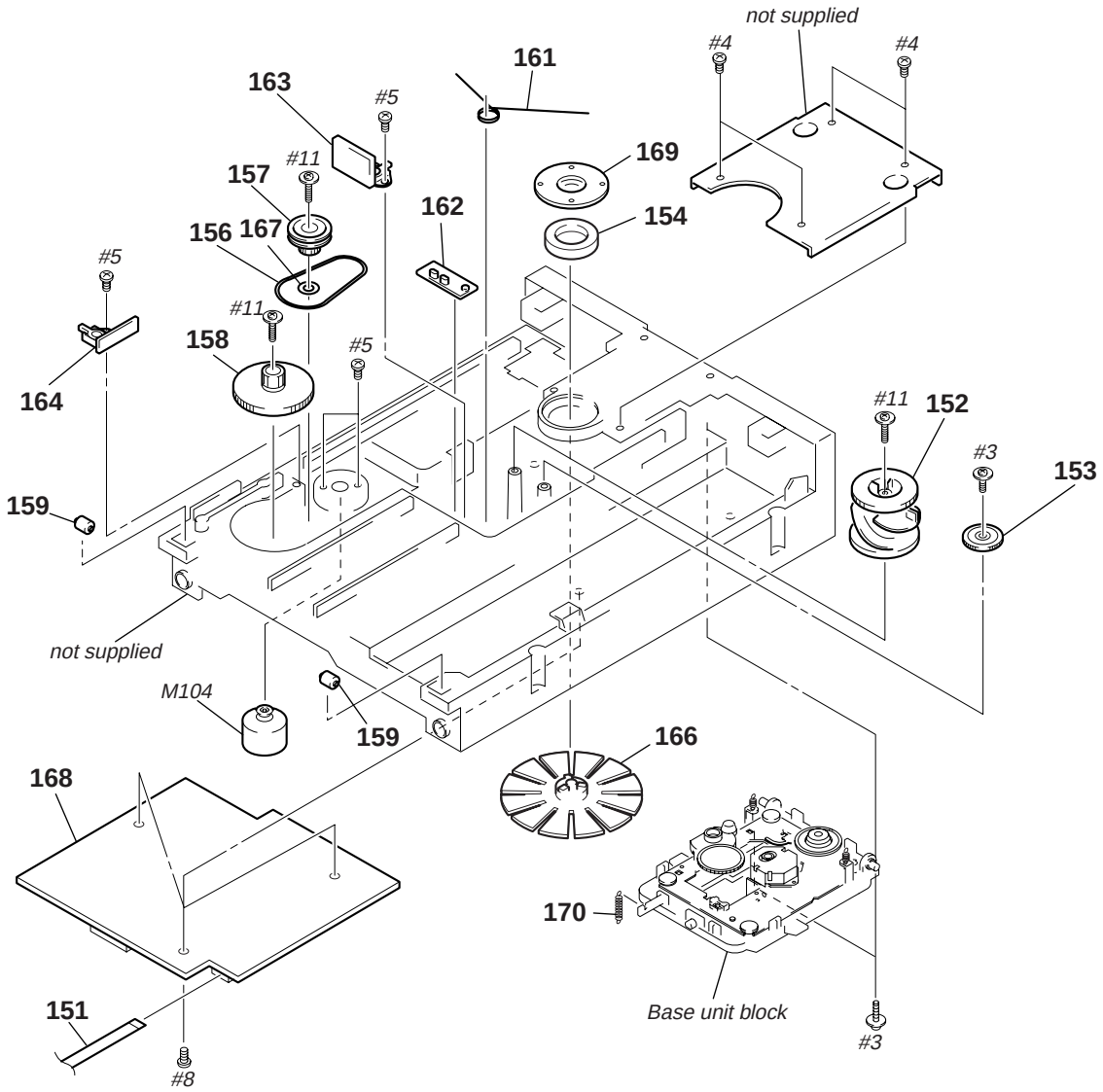
7-3. CD MECHANISM DECK SECTION-1



Ref. No.	Part No.	Description	Remarks
101	1-674-792-11	MOTOR BOARD	
103	4-221-891-01	BASE CHANGER	
104	4-221-895-01	SHEET, BLIND	
105	4-221-896-01	LEVER, SENSOR (SW)	
106	4-992-182-01	SPRING, SENSOR (SW) LEVER	
107	4-992-170-01	BELT, LOADING	
108	4-992-171-01	PULLEY, GEAR	
109	4-221-894-01	GEAR, TR	
110	4-221-892-01	GEAR, TR LOCK	
111	4-221-893-01	GEAR (C), RELAY	
112	4-992-187-01	CUSHION	
113	4-992-186-01	CUSHION, SW LEVER	
114	4-992-173-01	GEAR (B), RELAY	

Ref. No.	Part No.	Description	Remarks
115	4-992-183-01	SCREW, RELAY GEAR (B)	
116	4-992-174-01	GEAR, CHANGE	
117	4-992-184-01	WASHER, CHANGE GEAR	
118	4-992-176-01	SPRING, CHANGE GEAR	
119	4-992-185-01	WASHER, CHANGE PLATE	
120	4-992-172-01	GEAR (A), RELAY	
121	4-221-902-01	PLATE, T/T	
122	4-992-201-01	WASHER, POLYEHTHYLENE	
123	1-674-789-11	SW (B) BOARD	
124	1-674-788-11	SW (A) BOARD	
* 125	4-993-034-01	GUIDE, RAIL	
126	4-221-901-01	TURNTABLE	
M103	X-4948-765-1	MOTOR ASSY	

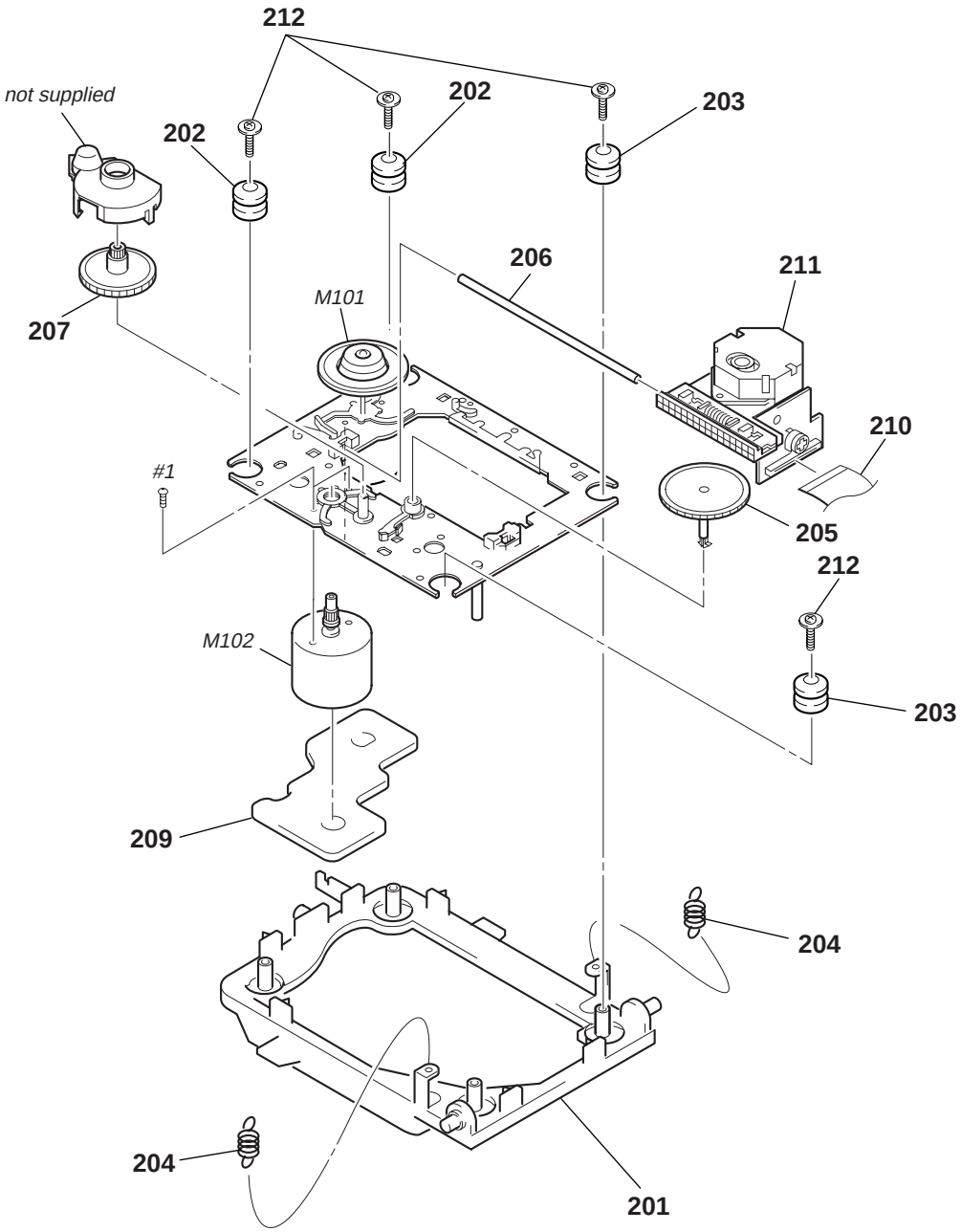
7-4. CD MECHANISM DECK SECTION-2



Ref. No.	Part No.	Description	Remarks
151	1-769-856-11	WIRE (FLAT TYPE) (5 CORE)	
152	4-221-897-01	UD-CAM	
153	4-992-191-01	UD-GEAR	
154	4-992-195-01	MAGNET	
156	4-992-197-01	BELT, LOADING GEAR	
157	4-992-198-01	PULLEY (B), GEAR	
158	4-992-199-01	GEAR, SLIDE	
159	4-992-200-01	ROLLER	
160	4-992-192-01	SPRING, BRAKE CAM	
161	4-992-193-01	LEVER, SW	

Ref. No.	Part No.	Description	Remarks
162	1-674-791-11	SW (D) BOARD	
163	1-674-790-11	SW (C) BOARD	
164	4-992-194-01	CLAMP	
165	4-992-201-01	WASHER, POLYETHYLENE	
166	4-221-898-01	HOLDER, MAGNET	
168	A-4426-391-A	CD DECORD BOARD, COMPLETE	
169	4-221-900-01	COVER, MAGNET	
170	4-221-903-01	SPRING, MECHANICAL BASE	
M104	X-4948-766-1	MOTOR ASSY (A)	

7-5. BASE UNIT SECTION (KSM-213ECM)



Ref. No.	Part No.	Description	Remarks
201	4-992-164-01	BASE, KSM MECHANICAL	
202	4-992-165-01	DAMPER (GREEN)	
203	4-992-166-01	DAMPER (RED)	
204	4-992-167-01	SPRING, MECHANICAL BASE	
205	2-626-907-01	GEAR (A)(S)	
206	2-626-908-01	SHAFT, SLED	
207	2-627-003-02	GEAR (B)	
209	1-639-678-12	MOTOR (6P)(S) BOARD	
210	1-783-740-11	WIRE (FLAT TYPE)	
⚠211	8-820-054-03	OPTICAL PICK-UP KSS-213ECM/C2NP	
212	3-319-501-51	SCREW (+PTPWH) (2.6 × 16)	
M101	X-2625-877-1	MOTOR ASSY (SPINDLE)	
M102	X-2625-769-1	MOTOR ASSY (SLED)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

AC SWITCH

AMPLIFIER

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- Abbreviation
  AUS : Australian model
  G : German model
  SP : Singapore model
  MX : Mexican model
  AR : Argentina model
  TW : Taiwan model
  AED : North European model
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
	1-674-880-1	AC SWITCH BOARD (GRX20:AR,E,MX,SP,TW)			
		**********			
		< SWITCH >			
⚠SW401	1-771-477-11	SELECTOR, VOLTAGE (VOLTAGE SELECTOR) (GRX20:AR,E,MX,SP,TW)			
**********					
	A-4426-292-A	AMPLIFIER BOARD, COMPLETE (RXD3)			
		**********			
	A-4426-293-A	AMPLIFIER BOARD, COMPLETE (GRX20:AUS)			
		**********			
	A-4426-294-A	AMPLIFIER BOARD, COMPLETE (GRX20:AR,E,MX,SP,TW)			
		**********			
*	1-533-213-31	HOLDER, FUSE			
		< CAPACITOR >			
C401	1-126-961-11	ELECT	2.2uF	20%	50V
C402	1-126-961-11	ELECT	2.2uF	20%	50V
C403	1-162-294-31	CERAMIC	0.001uF	10%	50V
C404	1-162-294-31	CERAMIC	0.001uF	10%	50V
C405	1-104-664-11	ELECT	47uF	20%	25V
C406	1-104-664-11	ELECT	47uF	20%	25V
C407	1-126-968-11	ELECT	100uF	20%	50V (GRX20:AR,E,MX,SP,TW/RXD3)
C407	1-128-576-11	ELECT	100uF	20%	63V (GRX20:AUS)
C408	1-126-968-11	ELECT	100uF	20%	50V (GRX20:AR,E,MX,SP,TW/RXD3)
C408	1-128-576-11	ELECT	100uF	20%	63V (GRX20:AUS)
C409	1-130-495-11	MYLAR	0.1uF	5%	50V
C410	1-126-968-11	ELECT	100uF	20%	50V (GRX20:AR,E,MX,SP,TW/RXD3)
C410	1-128-576-11	ELECT	100uF	20%	63V (GRX20:AUS)
C411	1-126-968-11	ELECT	100uF	20%	50V (GRX20:AR,E,MX,SP,TW/RXD3)
C411	1-128-576-11	ELECT	100uF	20%	63V (GRX20:AUS)
C413	1-162-199-31	CERAMIC	10PF	5%	50V
C414	1-162-199-31	CERAMIC	10PF	5%	50V
C415	1-137-399-11	FILM	0.1uF	5%	100V
C416	1-137-399-11	FILM	0.1uF	5%	100V
C417	1-161-494-00	CERAMIC	0.022uF		25V
C418	1-161-494-00	CERAMIC	0.022uF		25V
C419	1-162-294-31	CERAMIC	0.001uF	10%	50V
C421	1-126-933-11	ELECT	100uF	20%	16V
C422	1-161-494-00	CERAMIC	0.022uF		25V
C423	1-162-294-31	CERAMIC	0.001uF	10%	50V
C424	1-162-294-31	CERAMIC	0.001uF	10%	50V
C425	1-162-294-31	CERAMIC	0.001uF	10%	50V
C426	1-162-294-31	CERAMIC	0.001uF	10%	50V
C427	1-126-963-11	ELECT	4.7uF	20%	50V
C428	1-126-933-11	ELECT	100uF	20%	16V
C429	1-126-960-11	ELECT	1uF	20%	50V
C430	1-109-889-11	ELECT	1uF	20%	50V
C433	1-130-495-11	MYLAR	0.1uF	5%	50V
C497	1-162-282-31	CERAMIC	100PF	10%	50V
C498	1-162-282-31	CERAMIC	100PF	10%	50V
C499	1-161-494-00	CERAMIC	0.022uF	25V	
C701	1-126-974-11	ELECT	3300uF	20%	50V (GRX20:AR,E,MX,SP,TW/RXD3)
C701	1-127-812-11	ELECT	3300uF	20%	63V (GRX20:AUS)
C702	1-126-974-11	ELECT	3300uF	20%	50V (GRX20:AR,E,MX,SP,TW/RXD3)
C702	1-127-812-11	ELECT	3300uF	20%	63V (GRX20:AUS)
C703	1-130-483-00	MYLAR	0.01uF	5%	50V
C704	1-130-483-00	MYLAR	0.01uF	5%	50V
C705	1-130-483-00	MYLAR	0.01uF	5%	50V
C706	1-130-483-00	MYLAR	0.01uF	5%	50V
C707	1-126-968-11	ELECT	100uF	20%	50V
C708	1-161-494-00	CERAMIC	0.022uF		25V
C709	1-161-494-00	CERAMIC	0.022uF		25V
C710	1-128-553-11	ELECT	220uF	20%	63V
C711	1-161-494-00	CERAMIC	0.022uF		25V
C712	1-126-961-11	ELECT	2.2uF	20%	50V
C713	1-126-948-11	ELECT	100uF	20%	35V
C714	1-161-494-00	CERAMIC	0.022uF		25V
C715	1-126-949-11	ELECT	220uF	20%	35V
C716	1-161-494-00	CERAMIC	0.022uF		25V
C717	1-161-494-00	CERAMIC	0.022uF		25V
C718	1-161-494-00	CERAMIC	0.022uF		25V
C719	1-161-494-00	CERAMIC	0.022uF		25V
C720	1-161-494-00	CERAMIC	0.022uF		25V
C721	1-126-943-11	ELECT	2200uF	20%	25V
C722	1-126-933-11	ELECT	100uF	20%	16V
C723	1-161-494-00	CERAMIC	0.022uF		25V
C724	1-161-494-00	CERAMIC	0.022uF		25V
C725	1-126-933-11	ELECT	100uF	20%	16V
C726	1-126-933-11	ELECT	100uF	20%	16V
C727	1-161-494-00	CERAMIC	0.022uF		25V
C728	1-161-494-00	CERAMIC	0.022uF		25V
C729	1-126-935-11	ELECT	470uF	20%	16V
C730	1-161-494-00	CERAMIC	0.022uF		25V
C731	1-161-494-00	CERAMIC	0.022uF		25V

Ref. No.	Part No.	Description			Remarks
C732	1-161-494-00	CERAMIC	0.022uF		25V
C733	1-104-664-11	ELECT	47uF	20%	25V
C734	1-126-934-11	ELECT	220uF	20%	16V
C735	1-161-494-00	CERAMIC	0.022uF		25V
C751	1-126-967-11	ELECT	47uF	20%	50V
		< CONNECTOR >			
* CN701	1-568-837-11	SOCKET, CONNECTOR 20P			
* CN703	1-564-510-11	PLUG, CONNECTOR 7P			
		< DIODE >			
D402	8-719-991-33	DIODE 1SS133T-77			
D403	8-719-991-33	DIODE 1SS133T-77			
D404	8-719-991-33	DIODE 1SS133T-77			
D405	8-719-991-33	DIODE 1SS133T-77			
D406	8-719-991-33	DIODE 1SS133T-77			
D701	8-719-027-23	DIODE GBU6D			
D702	8-719-200-02	DIODE 1N4002			
D703	8-719-200-02	DIODE 1N4002			
D704	8-719-200-02	DIODE 1N4002			
D705	8-719-200-02	DIODE 1N4002			
D706	8-719-200-02	DIODE 1N4002			
D707	8-719-200-02	DIODE 1N4002			
D708	8-719-200-02	DIODE 1N4002			
D709	8-719-010-73	DIODE UZ-12BSA			
D711	8-719-012-33	DIODE UZ-27BSA-TA			
D712	8-719-010-57	DIODE UZ-8.2BSA			
D713	8-719-991-33	DIODE 1SS133T-77			
D714	8-719-010-73	DIODE UZ-12BSA			
D716	8-719-947-12	DIODE UZ-4.7BSA			
		< FUSE >			
⚠F701	1-532-388-31	FUSE TL2.0A 250V (GRX20:AR,AUS,E,SP,TW/RXD3)			
⚠F701	1-576-104-11	FUSE 2.0A 250V (GRX20:MX)			
		< IC >			
IC401	8-749-015-44	IC STK407-070E			
IC402	8-759-111-68	IC uPC1237HA			
		< JACK >			
JK401	1-694-443-11	TERMINAL BOARD (SPEAKER)			
		< COIL >			
L401	1-420-872-00	COIL, AIR-CORE (RXD3)			
L402	1-420-872-00	COIL, AIR-CORE (RXD3)			
		< TRANSISTOR >			
Q401	8-729-231-55	TRANSISTOR 2SC2878-A			
Q402	8-729-231-55	TRANSISTOR 2SC2878-A			
Q403	8-729-184-53	TRANSISTOR 2SC1841-EA			
Q404	8-729-184-53	TRANSISTOR 2SC1841-EA			
Q405	8-729-140-82	TRANSISTOR 2SA988-FA			
Q411	8-729-026-29	TRANSISTOR 2SJ346			
Q412	8-729-231-55	TRANSISTOR 2SC2878-A			
Q413	8-729-231-55	TRANSISTOR 2SC2878-A			
Q701	8-729-822-89	TRANSISTOR 2SD1667			
Q702	8-729-188-23	TRANSISTOR 2SD882-P			

Ref. No.	Part No.	Description			Remarks
Q703	8-729-202-67	TRANSISTOR 2SK246-GR3			
Q704	8-729-202-67	TRANSISTOR 2SK246-GR3			
Q705	8-729-232-32	TRANSISTOR 2SA965-O/Y(TPE6)			
		< RESISTOR >			
R401	1-247-879-11	CARBON	100K	5%	1/4W
R402	1-247-879-11	CARBON	100K	5%	1/4W
R403	1-247-839-11	CARBON	2.2K	5%	1/4W
R404	1-247-839-11	CARBON	2.2K	5%	1/4W
R405	1-249-438-11	CARBON	56K	5%	1/4W
R406	1-249-438-11	CARBON	56K	5%	1/4W
R407	1-249-420-11	CARBON	1.8K	5%	1/4W F
R408	1-249-420-11	CARBON	1.8K	5%	1/4W F
R409	1-249-438-11	CARBON	56K	5%	1/4W
R410	1-249-438-11	CARBON	56K	5%	1/4W
R411	1-260-087-11	CARBON	100	5%	1/2W
R412	1-249-417-11	CARBON	1K	5%	1/4W F
R413	1-249-417-11	CARBON	1K	5%	1/4W F
R414	1-260-087-11	CARBON	100	5%	1/2W
R415	1-249-431-11	CARBON	15K	5%	1/4W
R416	1-249-431-11	CARBON	15K	5%	1/4W
R417	1-260-072-11	CARBON	4.7	5%	1/2W
R418	1-260-072-11	CARBON	4.7	5%	1/2W
R419	1-220-889-11	METAL	0.22	10%	3W
R420	1-220-889-11	METAL	0.22	10%	3W
R421	1-247-879-11	CARBON	100K	5%	1/4W
R422	1-247-879-11	CARBON	100K	5%	1/4W
R423	1-247-839-11	CARBON	2.2K	5%	1/4W
R424	1-249-430-11	CARBON	12K	5%	1/4W
R425	1-249-430-11	CARBON	12K	5%	1/4W
R426	1-247-871-11	CARBON	47K	5%	1/4W
R427	1-249-417-11	CARBON	1K	5%	1/4W F
R428	1-249-438-11	CARBON	56K	5%	1/4W
R429	1-247-855-11	CARBON	10K	5%	1/4W
R430	1-247-879-11	CARBON	100K	5%	1/4W
R432	1-247-847-11	CARBON	4.7K	5%	1/4W
R434	1-260-072-11	CARBON	4.7	5%	1/2W (RXD3)
R435	1-260-072-11	CARBON	4.7	5%	1/2W (RXD3)
R442	1-247-835-11	CARBON	1.5K	5%	1/4W
R443	1-247-903-00	CARBON	1M	5%	1/4W
R444	1-249-393-11	CARBON	10	5%	1/4W F
R446	1-247-862-11	CARBON	20K	5%	1/4W
R448	1-247-843-11	CARBON	3.3K	5%	1/4W
R449	1-247-843-11	CARBON	3.3K	5%	1/4W
R451	1-247-879-11	CARBON	100K	5%	1/4W
R455	1-215-867-00	METAL OXIDE	470	5%	1W F
R456	1-215-867-00	METAL OXIDE	470	5%	1W F
R702	1-249-413-11	CARBON	470	5%	1/4W F
R703	1-215-863-11	METAL OXIDE	100	5%	1W F
R704	1-247-847-11	CARBON	4.7K	5%	1/4W
R705	1-247-855-11	CARBON	10K	5%	1/4W
R706	1-215-863-11	METAL OXIDE	100	5%	1W F
R707	1-249-413-11	CARBON	470	5%	1/4W F
R708	1-247-807-11	CARBON	100	5%	1/4W
R709	1-247-807-11	CARBON	100	5%	1/4W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

AMPLIFIER CD DECORD

Ref. No.	Part No.	Description			Remarks
R710	1-215-892-11	METAL OXIDE	1K	5%	2W F
R712	1-249-413-11	CARBON	470	5%	1/4W F
R751	1-247-839-11	CARBON	2.2K	5%	1/4W
R752	1-247-863-11	CARBON	22K	5%	1/4W
R753	1-247-855-11	CARBON	10K	5%	1/4W
		< RELAY >			
RL401	1-515-921-11	RELAY 12V			

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	A-4426-391-A	CD DECORD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C701	1-104-664-11	ELECT	47uF	20%	16V
C702	1-137-399-11	FILM	0.1uF	5%	100V
C703	1-137-399-11	FILM	0.1uF	5%	100V
C704	1-137-352-11	FILM	0.033uF	5%	100V
C705	1-137-393-11	FILM	0.01uF	5%	100V
C706	1-128-551-11	ELECT	22uF	20%	25V
C707	1-162-203-31	CERAMIC	15PF	5%	50V
C708	1-164-159-11	CERAMIC	0.1uF		50V
C711	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C712	1-162-306-11	CERAMIC	0.01uF	20%	16V
C713	1-136-291-11	FILM	0.0068uF	5%	100V
C714	1-137-397-11	FILM	0.047uF	5%	100V
C715	1-161-494-00	CERAMIC	0.022uF		25V
C716	1-137-399-11	FILM	0.1uF	5%	100V
C717	1-104-665-11	ELECT	100uF	20%	10V
C718	1-104-665-11	ELECT	100uF	20%	10V
C719	1-137-399-11	FILM	0.1uF	5%	100V
C720	1-137-389-11	FILM	0.0022uF	5%	100V
C721	1-137-399-11	FILM	0.1uF	5%	100V
C722	1-137-399-11	FILM	0.1uF	5%	100V
C723	1-137-399-11	FILM	0.1uF	5%	100V
C724	1-107-713-11	ELECT	4.7uF	20%	50V
C725	1-137-352-11	FILM	0.033uF	5%	100V
C726	1-137-462-11	FILM	0.018uF	5%	100V
C727	1-162-199-31	CERAMIC	10PF	5%	50V
C728	1-137-398-11	FILM	0.068uF	5%	100V
C729	1-126-962-11	ELECT	3.3uF	20%	50V
C730	1-162-215-31	CERAMIC	47PF	5%	50V
C731	1-164-159-11	CERAMIC	0.1uF		50V
C732	1-161-494-00	CERAMIC	0.022uF		25V
C733	1-104-665-11	ELECT	100uF	20%	10V
C734	1-161-494-00	CERAMIC	0.022uF		25V
C735	1-126-925-11	ELECT	470uF	20%	10V
C736	1-162-294-31	CERAMIC	0.001uF	10%	50V
C737	1-162-306-11	CERAMIC	0.01uF	20%	16V
C738	1-164-159-11	CERAMIC	0.1uF		50V
C740	1-126-925-11	ELECT	470uF	20%	10V
C741	1-161-494-00	CERAMIC	0.022uF		25V
C742	1-161-494-00	CERAMIC	0.022uF		25V
C743	1-126-927-11	ELECT	2200uF	20%	10V
C744	1-162-306-11	CERAMIC	0.01uF	20%	16V
C745	1-162-306-11	CERAMIC	0.01uF	20%	16V
C746	1-107-713-11	ELECT	4.7uF	20%	35V
C746A	1-126-963-11	ELECT	4.7uF	20%	50V
C751	1-162-306-11	CERAMIC	0.01uF	20%	16V

Ref. No.	Part No.	Description			Remarks
C752	1-126-964-11	ELECT	10uF	20%	50V
C753	1-161-494-00	CERAMIC	0.022uF		25V
C754	1-104-665-11	ELECT	100uF	20%	10V
C755	1-161-494-00	CERAMIC	0.022uF		25V
C756	1-136-173-00	FILM	0.47uF	5%	50V
C757	1-162-306-11	CERAMIC	0.01uF	20%	16V
C759	1-162-290-31	CERAMIC	470PF	10%	50V
C760	1-162-286-31	CERAMIC	220PF	10%	50V
C761	1-136-169-00	FILM	0.22uF	5%	50V
C762	1-137-393-11	FILM	0.01uF	5%	100V
C763	1-161-494-00	CERAMIC	0.022uF		25V
C764	1-104-665-11	ELECT	100uF	20%	10V
C765	1-162-294-31	CERAMIC	0.001uF	10%	50V
C766	1-162-294-31	CERAMIC	0.001uF	10%	50V
C767	1-162-294-31	CERAMIC	0.001uF	10%	50V
C768	1-162-294-31	CERAMIC	0.001uF	10%	50V
C769	1-162-294-31	CERAMIC	0.001uF	10%	50V
C770	1-164-159-11	CERAMIC	0.1uF		50V
C771	1-161-494-00	CERAMIC	0.022uF		25V
C771A	1-161-494-00	CERAMIC	0.022uF		25V
C772	1-161-494-00	CERAMIC	0.022uF		25V
C773	1-102-961-00	CERAMIC	27PF	5%	50V
C774	1-102-961-00	CERAMIC	27PF	5%	50V
C777	1-162-294-31	CERAMIC	0.001uF	10%	50V
C778	1-162-294-31	CERAMIC	0.001uF	10%	50V
C779	1-162-282-31	CERAMIC	100PF	10%	50V
C779A	1-126-960-11	ELECT	1uF	20%	50V
C780	1-162-294-31	CERAMIC	0.001uF	10%	50V
C780A	1-126-960-11	ELECT	1uF	20%	50V
C781	1-162-284-31	CERAMIC	150PF	10%	50V
C782	1-162-284-31	CERAMIC	150PF	10%	50V
C783	1-162-292-31	CERAMIC	680PF	10%	50V
C784	1-162-292-31	CERAMIC	680PF	10%	50V
C785	1-126-963-11	ELECT	4.7uF	20%	50V
C786	1-126-963-11	ELECT	4.7uF	20%	50V
C787	1-162-294-31	CERAMIC	0.001uF	10%	50V
C788	1-162-294-31	CERAMIC	0.001uF	10%	50V
C789	1-161-494-00	CERAMIC	0.022uF		25V
C790	1-126-927-11	ELECT	2200uF	20%	10V
C790A	1-161-494-00	CERAMIC	0.022uF		25V
C791	1-164-159-11	CERAMIC	0.1uF		50V
C792	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C793	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C794	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C795	1-164-159-11	CERAMIC	0.1uF		50V
C797	1-161-494-00	CERAMIC	0.022uF		25V
C798	1-126-963-11	ELECT	4.7uF	20%	50V
C799	1-161-494-00	CERAMIC	0.022uF		25V
C799B	1-104-665-11	ELECT	100uF	20%	10V
		< CONNECTOR >			
CN701	1-580-475-11	SOCKET, CONNECTOR 16P			
CN705	1-568-822-21	SOCKET, CONNECTOR 22P			
* CN706	1-568-824-11	SOCKET, CONNECTOR 5P			
* CN707	1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P			
		< DIODE >			
D703	8-719-991-33	DIODE 1SS133T-77			
D707	8-719-991-33	DIODE 1SS133T-77			
D708	8-719-991-33	DIODE 1SS133T-77			

Ref. No.	Part No.	Description			Remarks
		< IC >			
IC701	8-752-082-14	IC CXA1992BR			
IC702	8-752-384-13	IC CXD2589Q			
IC703	8-759-579-80	IC BA5936S			
IC704	8-759-234-75	IC TC74HC4094AP			
IC705	8-759-505-55	IC NJM4558L			
		< COIL >			
L704	1-410-509-11	INDUCTOR 10uH			
L705	1-410-509-11	INDUCTOR 10uH			
		< TRANSISTOR >			
Q701	8-729-195-23	TRANSISTOR 2SA952-L			
Q702	8-729-195-23	TRANSISTOR 2SA952-L			
Q703	8-729-195-23	TRANSISTOR 2SA952-L			
Q705	8-729-194-57	TRANSISTOR 2SC945TP-P			
Q706	8-729-194-57	TRANSISTOR 2SC945TP-P			
Q707	8-729-195-23	TRANSISTOR 2SA952-L			
Q708	8-729-195-23	TRANSISTOR 2SA952-L			
		< RESISTOR >			
R701	1-249-393-11	CARBON	10	5%	1/4W F
R704	1-247-862-11	CARBON	20K	5%	1/4W
R705	1-247-855-11	CARBON	10K	5%	1/4W
R706	1-249-430-11	CARBON	12K	5%	1/4W
R707	1-247-903-00	CARBON	1M	5%	1/4W
R710	1-247-887-00	CARBON	220K	5%	1/4W
R710A	1-249-417-11	CARBON	1K	5%	1/4W F
R711	1-247-883-00	CARBON	150K	5%	1/4W
R713	1-247-879-11	CARBON	100K	5%	1/4W
R714	1-249-439-11	CARBON	68K	5%	1/4W
R715	1-249-439-11	CARBON	68K	5%	1/4W
R716	1-249-439-11	CARBON	68K	5%	1/4W
R717	1-249-439-11	CARBON	68K	5%	1/4W
R718	1-247-879-11	CARBON	100K	5%	1/4W
R719	1-247-883-00	CARBON	150K	5%	1/4W
R720	1-247-891-00	CARBON	330K	5%	1/4W
R721	1-247-885-00	CARBON	180K	5%	1/4W
R722	1-247-807-11	CARBON	100	5%	1/4W
R723	1-247-855-11	CARBON	10K	5%	1/4W
R724	1-247-855-11	CARBON	10K	5%	1/4W
R725	1-247-899-11	CARBON	680K	5%	1/4W
R726	1-249-440-11	CARBON	82K	5%	1/4W
R727	1-247-896-11	CARBON	510K	5%	1/4W
R728	1-247-807-11	CARBON	100	5%	1/4W
R729	1-249-439-11	CARBON	68K	5%	1/4W
R730	1-247-871-11	CARBON	47K	5%	1/4W
R731	1-249-417-11	CARBON	1K	5%	1/4W F
R732	1-247-883-00	CARBON	150K	5%	1/4W
R733	1-249-430-11	CARBON	12K	5%	1/4W
R734	1-247-876-11	CARBON	75K	5%	1/4W
R735	1-247-879-11	CARBON	100K	5%	1/4W
R736	1-247-807-11	CARBON	100	5%	1/4W
R737	1-249-417-11	CARBON	1K	5%	1/4W F
R739	1-247-807-11	CARBON	100	5%	1/4W
R740	1-249-431-11	CARBON	15K	5%	1/4W
R741	1-249-431-11	CARBON	15K	5%	1/4W
R742	1-249-385-11	CARBON	2.2	5%	1/6W F
R743	1-247-863-11	CARBON	22K	5%	1/4W
R744	1-247-863-11	CARBON	22K	5%	1/4W
R745	1-247-863-11	CARBON	22K	5%	1/4W

Ref. No.	Part No.	Description			Remarks
R746	1-249-432-11	CARBON	18K	5%	1/4W
R747	1-249-432-11	CARBON	18K	5%	1/4W
R747A	1-247-855-11	CARBON	10K	5%	1/4W
R748	1-247-847-11	CARBON	4.7K	5%	1/4W
R748A	1-249-417-11	CARBON	1K	5%	1/4W F
R751	1-247-863-11	CARBON	22K	5%	1/4W
R752	1-247-867-11	CARBON	33K	5%	1/4W
R753	1-249-428-11	CARBON	8.2K	5%	1/4W F
R755	1-247-871-11	CARBON	47K	5%	1/4W
R756	1-247-867-11	CARBON	33K	5%	1/4W
R758	1-247-871-11	CARBON	47K	5%	1/4W
R759	1-247-843-11	CARBON	3.3K	5%	1/4W
R760	1-249-417-11	CARBON	1K	5%	1/4W F
R761	1-247-855-11	CARBON	10K	5%	1/4W
R762	1-247-903-00	CARBON	1M	5%	1/4W
R763	1-247-887-00	CARBON	220K	5%	1/4W
R764	1-247-855-11	CARBON	10K	5%	1/4W
R765	1-247-871-11	CARBON	47K	5%	1/4W
R766	1-249-417-11	CARBON	1K	5%	1/4W F
R766A	1-249-417-11	CARBON	1K	5%	1/4W F
R767	1-249-417-11	CARBON	1K	5%	1/4W F
R767A	1-249-417-11	CARBON	1K	5%	1/4W F
R768A	1-249-417-11	CARBON	1K	5%	1/4W F
R771	1-249-417-11	CARBON	1K	5%	1/4W F
R773	1-249-442-11	CARBON	510	5%	1/4W
R774	1-247-903-00	CARBON	1M	5%	1/4W
R775	1-247-867-11	CARBON	33K	5%	1/4W
R777	1-247-839-11	CARBON	2.2K	5%	1/4W
R778	1-247-839-11	CARBON	2.2K	5%	1/4W
R778L	1-247-847-11	CARBON	4.7K	5%	1/4W
R778R	1-247-847-11	CARBON	4.7K	5%	1/4W
R779	1-247-839-11	CARBON	2.2K	5%	1/4W
R780	1-247-839-11	CARBON	2.2K	5%	1/4W
R780A	1-249-417-11	CARBON	1K	5%	1/4W F
R781	1-249-430-11	CARBON	12K	5%	1/4W
R782	1-249-430-11	CARBON	12K	5%	1/4W
R783	1-249-430-11	CARBON	12K	5%	1/4W
R784	1-249-430-11	CARBON	12K	5%	1/4W
R785	1-249-430-11	CARBON	12K	5%	1/4W
R786	1-249-430-11	CARBON	12K	5%	1/4W
R787	1-247-839-11	CARBON	2.2K	5%	1/4W
R788	1-247-839-11	CARBON	2.2K	5%	1/4W
R789	1-247-847-11	CARBON	4.7K	5%	1/4W
R790	1-247-847-11	CARBON	4.7K	5%	1/4W
R795	1-249-417-11	CARBON	1K	5%	1/4W F
R795A	1-247-855-11	CARBON	10K	5%	1/4W
R796	1-249-417-11	CARBON	1K	5%	1/4W F
R796A	1-247-855-11	CARBON	10K	5%	1/4W
R797	1-249-417-11	CARBON	1K	5%	1/4W F
R798L	1-247-855-11	CARBON	10K	5%	1/4W
R798R	1-247-855-11	CARBON	10K	5%	1/4W
		< VIBRATOR >			
XTL01	1-567-908-11	VIBRATOR, CRYSTAL (16.9344MHz)			

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FRONT

Ref. No.	Part No.	Description			Remarks
	A-4426-056-A	FRONT BOARD, COMPLETE(GRX20:AUS/RXD3)			
		**********			
	A-4426-289-A	FRONT BOARD, COMPLETE (GRX20:AR,E)			
		**********			
	A-4426-290-A	FRONT BOARD, COMPLETE (GRX20:MX)			
		**********			
	A-4426-291-A	FRONT BOARD, COMPLETE (GRX20:SP,TW)			
		**********			
	4-220-812-01	HOLDER, DISPLAY			
		< CAPACITOR >			
C601	1-126-916-11	ELECT	1000uF	20%	6.3V
C602	1-161-494-00	CERAMIC	0.022uF		25V
C603	1-164-159-11	CERAMIC	0.1uF		50V
C604	1-126-933-11	ELECT	100uF	20%	16V
C605	1-104-664-11	ELECT	47uF	20%	16V
C606	1-164-159-11	CERAMIC	0.1uF		50V
C608	1-126-958-11	ELECT	0.33uF	20%	50V
C608A	1-126-960-11	ELECT	1uF	20%	50V
C609	1-164-159-11	CERAMIC	0.1uF		50V
C610	1-126-964-11	ELECT	10uF	20%	50V
C611	1-161-494-00	CERAMIC	0.022uF		25V
C612	1-126-960-11	ELECT	1uF	20%	50V
C613	1-102-852-91	CERAMIC	47PF	5%	50V
C614	1-102-852-91	CERAMIC	47PF	5%	50V
C615	1-126-964-11	ELECT	10uF	20%	50V
C616	1-164-206-41	CERAMIC	0.047uF	99%	50V
C620	1-162-306-11	CERAMIC	0.01uF	30%	16V
C621	1-162-306-11	CERAMIC	0.01uF	30%	16V
C622	1-126-964-11	ELECT	10uF	20%	50V
C623	1-161-494-00	CERAMIC	0.022uF		25V
C624	1-162-286-31	CERAMIC	220PF	10%	50V
C625	1-162-286-31	CERAMIC	220PF	10%	50V
C626	1-162-286-31	CERAMIC	220PF	10%	50V
C641	1-126-957-11	ELECT	0.22uF	20%	50V
C642	1-126-957-11	ELECT	0.22uF	20%	50V
C643	1-164-206-41	CERAMIC	0.047uF	99%	50V
C644	1-126-959-11	ELECT	0.47uF	20%	50V
C645	1-126-957-11	ELECT	0.22uF	20%	50V
C646	1-162-306-11	CERAMIC	0.01uF	30%	16V
C647	1-126-957-11	ELECT	0.22uF	20%	50V
C648	1-126-957-11	ELECT	0.22uF	20%	50V
C649	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C650	1-130-489-11	MYLAR	0.033uF	5%	50V
C651	1-126-957-11	ELECT	0.22uF	20%	50V
C652	1-162-293-31	CERAMIC	820PF	10%	50V
		< CONNECTOR >			
CN601	1-770-404-11	HOUSING,CONNECTOR(PC BOARD)11P			
CN602	1-770-404-11	HOUSING,CONNECTOR(PC BOARD)11P			
CN603	1-568-822-21	SOCKET, CONNECTOR 22P			
		< DIODE >			
D601	8-719-200-02	DIODE 1N4002			
D602	8-719-200-02	DIODE 1N4002			
D603	8-719-911-19	DIODE 1SS133T-72			
D604	8-719-911-19	DIODE 1SS133T-72			
D612	8-719-911-19	DIODE 1SS133T-72 (GRX20:AUS/RXD3)			

Ref. No.	Part No.	Description	Remarks
D614	8-719-911-19	DIODE 1SS133T-72	
D616	8-719-911-19	DIODE 1SS133T-72	
			(GRX20:AR,AUS,E,SP,TW/RXD3)
D617	8-719-911-19	DIODE 1SS133T-72	
			(GRX20:AR,AUS,E,SP,TW/RXD3)
D618	8-719-911-19	DIODE 1SS133T-72 (GRX20:AR,E,MX)	
D619	8-719-911-19	DIODE 1SS133T-72	
			(GRX20:AR,AUS,E,SP,TW/RXD3)
D625	8-719-911-19	DIODE 1SS133T-72	
D626	8-719-911-19	DIODE 1SS133T-72	
D627	8-719-911-19	DIODE 1SS133T-72	
D628	8-719-911-19	DIODE 1SS133T-72	
D629	8-719-911-19	DIODE 1SS133T-72	
D630	8-719-911-19	DIODE 1SS133T-72	
D631	8-719-911-19	DIODE 1SS133T-72	
D633	8-719-911-19	DIODE 1SS133T-72	
D634	8-719-911-19	DIODE 1SS133T-72	
D635	8-719-911-19	DIODE 1SS133T-72	
D650	8-719-911-19	DIODE 1SS133T-72 (GRX20:AUS/RXD3)	
D651	8-719-911-19	DIODE 1SS133T-72 (GRX20:AUS/RXD3)	
D652	8-719-911-19	DIODE 1SS133T-72 (GRX20:AUS/RXD3)	
D653	8-719-911-19	DIODE 1SS133T-72 (GRX20:AUS/RXD3)	
D654	8-719-911-19	DIODE 1SS133T-72 (GRX20:AUS/RXD3)	
		< FLUORESCENT INDICATOR >	
FLD601	1-517-731-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC601	8-759-593-40	IC CXP82040-108Q	
IC602	8-759-275-23	IC BU2092	
		< COIL >	
L601	1-414-151-11	INDUCTOR 470uH	
		< LED >	
LED601	8-719-046-80	LED SML19416W-TP4 (▶▶I)	
LED602	8-719-311-60	LED SEL2810D-C (ENTER/NEXT)	
LED603	8-719-311-60	LED SEL2810D-C (II)	
LED604	8-719-321-10	LED SEL2110R (●)	
LED605	8-719-301-42	LED SEL2410E (TAPE B ◀)	
LED606	8-719-301-42	LED SEL2410E (TAPE B ▶)	
LED607	8-719-301-42	LED SEL2410E(TAPE A ▶)	
		< TRANSISTOR >	
Q601	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q602	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q603	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q604	8-729-119-76	TRANSISTOR 2SA733-P	
Q605	8-729-119-76	TRANSISTOR 2SA733-P (GRX20:AR,E,SP,TW)	
Q606	8-729-194-57	TRANSISTOR 2SC945TP-P	
			(GRX20:AR,E,SP,TW)
Q607	8-729-026-29	TRANSISTOR 2SJ346	
Q608	8-729-026-29	TRANSISTOR 2SJ346	

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
R600	1-249-407-11	CARBON	150	5%	1/4W F
R600A	1-249-417-11	CARBON	1K	5%	1/4W F
R600B	1-249-417-11	CARBON	1K	5%	1/4W F
R600C	1-247-871-11	CARBON	47K	5%	1/4W
R600D	1-247-847-11	CARBON	4.7K	5%	1/4W
R600E	1-247-847-11	CARBON	4.7K	5%	1/4W
R600F	1-247-847-11	CARBON	4.7K	5%	1/4W
R601	1-247-871-11	CARBON	47K	5%	1/4W
R602	1-249-417-11	CARBON	1K	5%	1/4W F
R603	1-247-871-11	CARBON	47K	5%	1/4W
R604	1-249-417-11	CARBON	1K	5%	1/4W F
R605	1-247-871-11	CARBON	47K	5%	1/4W
R606	1-249-417-11	CARBON	1K	5%	1/4W F
R607	1-249-431-11	CARBON	15K	5%	1/4W
R608	1-247-871-11	CARBON	47K	5%	1/4W
R609	1-247-871-11	CARBON	47K	5%	1/4W
R610	1-247-879-11	CARBON	100K	5%	1/4W (GRX20:AR,E,SP,TW)
R611	1-247-879-11	CARBON	100K	5%	1/4W (GRX20:AR,E,SP,TW)
R612	1-247-847-11	CARBON	4.7K	5%	1/4W (GRX20:AR,E,SP,TW)
R621	1-249-417-11	CARBON	1K	5%	1/4W F
R622	1-249-417-11	CARBON	1K	5%	1/4W F
R623	1-249-417-11	CARBON	1K	5%	1/4W F
R624	1-249-407-11	CARBON	150	5%	1/4W F
R625	1-249-407-11	CARBON	150	5%	1/4W F
R626	1-249-407-11	CARBON	150	5%	1/4W F
R627	1-249-407-11	CARBON	150	5%	1/4W F
R628	1-249-407-11	CARBON	150	5%	1/4W F
R629	1-249-407-11	CARBON	150	5%	1/4W F
R630	1-249-407-11	CARBON	150	5%	1/4W F
R631	1-249-407-11	CARBON	150	5%	1/4W F
R633	1-247-879-11	CARBON	100K	5%	1/4W
R634	1-247-879-11	CARBON	100K	5%	1/4W
R638	1-247-847-11	CARBON	4.7K	5%	1/4W
R639	1-247-847-11	CARBON	4.7K	5%	1/4W
R640	1-247-839-11	CARBON	2.2K	5%	1/4W
R641	1-247-847-11	CARBON	4.7K	5%	1/4W
R642	1-247-847-11	CARBON	4.7K	5%	1/4W
R643	1-247-847-11	CARBON	4.7K	5%	1/4W
R644	1-247-847-11	CARBON	4.7K	5%	1/4W
R645	1-247-847-11	CARBON	4.7K	5%	1/4W
R646	1-247-847-11	CARBON	4.7K	5%	1/4W
R647	1-247-855-11	CARBON	10K	5%	1/4W
R648	1-247-855-11	CARBON	10K	5%	1/4W
R649	1-247-855-11	CARBON	10K	5%	1/4W
R651	1-247-827-11	CARBON	680	5%	1/4W
R652	1-249-416-11	CARBON	820	5%	1/4W F
R653	1-249-418-11	CARBON	1.2K	5%	1/4W F
R654	1-247-835-11	CARBON	1.5K	5%	1/4W
R655	1-247-839-11	CARBON	2.2K	5%	1/4W
R656	1-247-843-11	CARBON	3.3K	5%	1/4W
R657	1-247-847-11	CARBON	4.7K	5%	1/4W
R658	1-249-428-11	CARBON	8.2K	5%	1/4W F
R659	1-249-951-11	CARBON	15K	1%	1/4W
R660	1-249-957-11	CARBON	27K	1%	1/4W
R661	1-247-827-11	CARBON	680	5%	1/4W

Ref. No.	Part No.	Description			Remarks
R662	1-249-416-11	CARBON	820	5%	1/4W F
R663	1-249-418-11	CARBON	1.2K	5%	1/4W F
R664	1-247-835-11	CARBON	1.5K	5%	1/4W
R665	1-247-839-11	CARBON	2.2K	5%	1/4W
R666	1-247-843-11	CARBON	3.3K	5%	1/4W
R667	1-247-847-11	CARBON	4.7K	5%	1/4W
R668	1-249-428-11	CARBON	8.2K	5%	1/4W F
R669	1-247-827-11	CARBON	680	5%	1/4W
R670	1-249-416-11	CARBON	820	5%	1/4W F
R671	1-249-418-11	CARBON	1.2K	5%	1/4W F
R672	1-247-835-11	CARBON	1.5K	5%	1/4W
R673	1-247-839-11	CARBON	2.2K	5%	1/4W
R674	1-247-843-11	CARBON	3.3K	5%	1/4W
R675	1-247-847-11	CARBON	4.7K	5%	1/4W
R676	1-249-428-11	CARBON	8.2K	5%	1/4W F
R677	1-249-951-11	CARBON	15K	1%	1/4W
R678	1-249-957-11	CARBON	27K	1%	1/4W
R680	1-247-895-00	CARBON	470K	5%	1/4W
R681	1-249-957-11	CARBON	27K	1%	1/4W
R683	1-247-895-00	CARBON	470K	5%	1/4W
R684	1-247-871-11	CARBON	47K	5%	1/4W
R685	1-247-835-11	CARBON	1.5K	5%	1/4W
R687	1-247-895-00	CARBON	470K	5%	1/4W
R688	1-247-871-11	CARBON	47K	5%	1/4W
R689	1-247-835-11	CARBON	1.5K	5%	1/4W
R691	1-247-895-00	CARBON	470K	5%	1/4W
R692	1-247-871-11	CARBON	47K	5%	1/4W
R693	1-247-835-11	CARBON	1.5K	5%	1/4W
R694	1-247-887-00	CARBON	220K	5%	1/4W
R695	1-247-895-00	CARBON	470K	5%	1/4W
R696	1-247-871-11	CARBON	47K	5%	1/4W
R697	1-247-835-11	CARBON	1.5K	5%	1/4W
RA605	1-247-871-11	CARBON	47K	5%	1/4W
RA606	1-247-871-11	CARBON	47K	5%	1/4W
RA607	1-247-871-11	CARBON	47K	5%	1/4W
RA608	1-247-871-11	CARBON	47K	5%	1/4W
RA609	1-247-871-11	CARBON	47K	5%	1/4W

< SWITCH >

S601	1-572-647-11	SWITCH, KEY BOARD (I/⏻)
S602	1-572-647-11	SWITCH, KEY BOARD (CLOCK/TIMER SHOT)
S603	1-572-647-11	SWITCH, KEY BOARD (TIMER SELECT)
S604	1-572-647-11	SWITCH, KEY BOARD (DISPLAY/DEMO)
S605	1-572-647-11	SWITCH, KEY BOARD (FILE SELECT)
S606	1-572-647-11	SWITCH, KEY BOARD (DBFB)
S607	1-572-647-11	SWITCH, KEY BOARD (+, ▶▶)
S608	1-572-647-11	SWITCH, KEY BOARD (–, ◀◀)
S609	1-572-647-11	SWITCH, KEY BOARD (▶▶I)
S610	1-572-647-11	SWITCH, KEY BOARD (I◀◀)
S611	1-572-647-11	SWITCH, KEY BOARD (■)
S612	1-572-647-11	SWITCH, KEY BOARD (TAPE B ▶)
S613	1-572-647-11	SWITCH, KEY BOARD (TAPE B ▶)
S614	1-572-647-11	SWITCH, KEY BOARD (CD ▶II)
S615	1-572-647-11	SWITCH, KEY BOARD (TUNER/BAND)

FRONT FUSE H/P MAIN

Ref. No.	Part No.	Description	Remarks
S616	1-572-647-11	SWITCH, KEY BOARD (REC)	
S617	1-572-647-11	SWITCH, KEY BOARD (PAUSE)	
S618	1-572-647-11	SWITCH, KEY BOARD (CD SYNC)	
S619	1-572-647-11	SWITCH, KEY BOARD (TAPE A ►)	
S620	1-572-647-11	SWITCH, KEY BOARD (FUNCTION)	
S621	1-572-647-11	SWITCH, KEY BOARD (PLAY MODE,TUNER MEMORY)	
S622	1-572-647-11	SWITCH, KEY BOARD (REPEAT,STEREO/MONO)	
S623	1-572-647-11	SWITCH, KEY BOARD (EDIT/DIRECTION)	
S624	1-572-647-11	SWITCH, KEY BOARD (ENTER/NEXT)	
S625	1-572-647-11	SWITCH, KEY BOARD (DISC 1)	
S626	1-572-647-11	SWITCH, KEY BOARD (DISC 2)	
S627	1-572-647-11	SWITCH, KEY BOARD (DISC 3)	
S628	1-572-647-11	SWITCH, KEY BOARD (DISC SKIP/EX-CHANGE)	
S629	1-572-647-11	SWITCH, KEY BOARD (⏏ OPEN/CLOSE)	
		< VIBRATOR >	
X601	1-567-925-11	VIBRATOR, CRYSTAL (10MHz)	
**********			
	1-674-558-11	FUSE BOARD	
		**********	
*	1-533-213-31	HOLDER, FUSE	
		< FUSE >	
⚠F702	1-532-504-31	FUSE 4.0A 250V (GRX20:AR,AUS,E,SP,TW)	
⚠F702	1-576-108-11	FUSE 4.0A 125V (GRX20:MX)	
⚠F702	1-532-388-31	FUSE 2.0A 250V (RXD3)	
⚠F703	1-532-388-31	FUSE 2.0A 250V (GRX20:AR,AUS,E,SP,TW)	
**********			
	1-674-559-11	H/P BOARD	
		*********	
		< CAPACITOR >	

Ref. No.	Part No.	Description			Remarks
C360	1-161-494-00	CERAMIC	0.022uF		25V
C361	1-161-494-00	CERAMIC	0.022uF		25V
C365	1-164-159-11	CERAMIC	0.1uF		50V
		< JACK >			
JK302	1-569-612-11	JACK, MINIATURE (PHONES)			
**********					
	A-4426-303-A	MAIN BOARD, COMPLETE (GRX20)			
		**********			
	A-4426-302-A	MAIN BOARD, COMPLETE (RXD3)			
		**********			
		< CAPACITOR >			
C100	1-162-294-31	CERAMIC	0.001uF	10%	50V
C107	1-162-306-11	CERAMIC	0.01uF	20%	16V (RXD3)
C108	1-126-933-11	ELECT	100uF	20%	16V
C113	1-161-494-00	CERAMIC	0.022uF		25V
C114	1-130-495-11	MYLAR	0.1uF	5%	50V
C115	1-161-494-00	CERAMIC	0.022uF		25V
C116	1-130-467-00	MYLAR	470PF	5%	50V
C117	1-162-205-31	CERAMIC	18PF	5%	50V
C118	1-126-933-11	ELECT	100uF	20%	16V
C120	1-130-491-00	MYLAR	0.047uF	5%	50V

Ref. No.	Part No.	Description			Remarks
C121	1-162-203-31	CERAMIC	15PF	5%	50V
C122	1-126-960-11	ELECT	1uF	20%	50V
C123	1-126-959-11	ELECT	0.47uF	20%	50V
C124	1-162-206-31	CERAMIC	20PF	5%	50V
C125	1-126-960-11	ELECT	1uF	20%	50V
C126	1-130-491-00	MYLAR	0.047uF	5%	50V
C128	1-161-494-00	CERAMIC	0.022uF		25V
C129	1-126-964-11	ELECT	10uF	20%	50V
C130	1-130-489-11	MYLAR	0.033uF	5%	50V
C131	1-130-489-11	MYLAR	0.033uF	5%	50V
C135	1-161-494-00	CERAMIC	0.022uF		25V (GRX20)
C135	1-162-291-31	CERAMIC	560PF	10%	50V (RXD3)
C137	1-126-959-11	ELECT	0.47uF	20%	50V
C138	1-164-159-11	CERAMIC	0.1uF		50V
C139	1-161-494-00	CERAMIC	0.022uF		25V
C140	1-126-933-11	ELECT	100uF	20%	16V
C141	1-161-494-00	CERAMIC	0.022uF		25V
C142	1-126-933-11	ELECT	100uF	20%	16V
C143	1-130-499-00	MYLAR	0.22uF	5%	50V
C144	1-136-153-00	FILM	0.01uF	5%	50V
C146	1-162-294-31	CERAMIC	0.001uF	10%	50V
C148	1-161-494-00	CERAMIC	0.022uF		25V
C149	1-162-294-31	CERAMIC	0.001uF	10%	50V
C150	1-161-494-00	CERAMIC	0.022uF		25V
C151	1-128-551-11	ELECT	22uF	20%	25V
C152	1-162-282-31	CERAMIC	100PF	10%	50V
C154	1-164-159-11	CERAMIC	0.1uF		50V
C155	1-162-294-31	CERAMIC	0.001uF	10%	50V
C156	1-162-209-31	CERAMIC	27PF	5%	50V
C157	1-162-209-31	CERAMIC	27PF	5%	50V
C158	1-104-664-11	ELECT	47uF	20%	16V
C159	1-162-306-11	CERAMIC	0.01uF	20%	16V
C160	1-126-963-11	ELECT	4.7uF	20%	50V
C161	1-126-963-11	ELECT	4.7uF	20%	50V
C162	1-161-494-00	CERAMIC	0.022uF		25V
C163	1-161-494-00	CERAMIC	0.022uF		25V
C164	1-126-962-11	ELECT	3.3uF	20%	50V
C166	1-162-294-31	CERAMIC	0.001uF	10%	50V (RXD3)
C167	1-162-199-31	CERAMIC	10PF	5%	50V (RXD3)
C177	1-161-494-00	CERAMIC	0.022uF		25V
C179	1-130-491-00	MYLAR	0.047uF	5%	50V
C185	1-161-494-00	CERAMIC	0.022uF		25V
C186	1-162-294-31	CERAMIC	0.001uF	10%	50V
C187	1-161-494-00	CERAMIC	0.022uF		25V
C188	1-164-159-11	CERAMIC	0.1uF		50V
C189	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C193	1-164-159-11	CERAMIC	0.1uF		50V
C194	1-162-286-31	CERAMIC	220PF	10%	50V
C195	1-162-286-31	CERAMIC	220PF	10%	50V
C196	1-162-286-31	CERAMIC	220PF	10%	50V
C197	1-162-286-31	CERAMIC	220PF	10%	50V
C198	1-126-959-11	ELECT	0.47uF	20%	50V
C199	1-130-491-00	MYLAR	0.047uF	5%	50V
C201	1-162-292-31	CERAMIC	680PF	10%	50V
C202	1-162-292-31	CERAMIC	680PF	10%	50V

The components identified by mark ⚠or dotted line with mark ⚠are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
C203	1-162-292-31	CERAMIC	680PF	10%	50V
C204	1-162-292-31	CERAMIC	680PF	10%	50V
C205	1-162-286-31	CERAMIC	220PF	10%	50V
C206	1-162-286-31	CERAMIC	220PF	10%	50V
C207	1-162-286-31	CERAMIC	220PF	10%	50V
C208	1-162-286-31	CERAMIC	220PF	10%	50V
C209	1-104-664-11	ELECT	47uF	20%	16V
C210	1-104-664-11	ELECT	47uF	20%	16V
C211	1-136-156-00	FILM	0.018uF	5%	50V
C212	1-136-156-00	FILM	0.018uF	5%	50V
C213	1-126-960-11	ELECT	1uF	20%	50V
C214	1-126-960-11	ELECT	1uF	20%	50V
C215	1-162-303-11	CERAMIC	0.0033uF	30%	16V
C216	1-162-303-11	CERAMIC	0.0033uF	30%	16V
C217	1-128-551-11	ELECT	22uF	20%	25V
C218	1-126-940-11	ELECT	330uF	20%	16V
C219	1-126-962-11	ELECT	3.3MF	20%	50V
C221	1-126-962-11	ELECT	3.3MF	20%	50V
C222	1-126-962-11	ELECT	3.3MF	20%	50V
C223	1-162-290-31	CERAMIC	470PF	10%	50V
C224	1-162-290-31	CERAMIC	470PF	10%	50V
C225	1-164-736-31	CERAMIC	0.0012uF	10%	50V
C226	1-164-736-31	CERAMIC	0.0012uF	10%	50V
C227	1-162-286-31	CERAMIC	220PF	10%	50V
C228	1-162-286-31	CERAMIC	220PF	10%	50V
C229	1-126-933-11	ELECT	100uF	20%	16V
C230	1-126-933-11	ELECT	100uF	20%	16V
C231	1-126-962-11	ELECT	3.3MF	20%	50V
C232	1-126-962-11	ELECT	3.3MF	20%	50V
C233	1-162-294-31	CERAMIC	0.001uF	10%	50V
C234	1-162-294-31	CERAMIC	0.001uF	10%	50V
C237	1-161-494-00	CERAMIC	0.022uF		25V
C238	1-126-961-11	ELECT	2.2uF	20%	50V
C251	1-130-485-00	MYLAR	0.015uF	5%	50V
C252	1-137-371-11	FILM	0.015uF	5%	50V
C253	1-130-483-00	MYLAR	0.01uF	5%	50V
C254	1-137-368-11	FILM	0.0047uF	5%	50V
C255	1-104-664-11	ELECT	47uF	20%	16V
C261	1-137-374-11	FILM	0.047uF	5%	50V
C262	1-137-374-11	FILM	0.047uF	5%	50V
C301	1-162-294-31	CERAMIC	0.001uF	10%	50V
C302	1-162-294-31	CERAMIC	0.001uF	10%	50V
C303	1-126-961-11	ELECT	2.2uF	20%	50V
C304	1-126-961-11	ELECT	2.2uF	20%	50V
C305	1-126-961-11	ELECT	2.2uF	20%	50V
C306	1-126-961-11	ELECT	2.2uF	20%	50V
C307	1-130-489-00	MYLAR	0.033uF	5%	50V
C309	1-130-499-00	MYLAR	0.22uF	5%	50V
C310	1-130-499-00	MYLAR	0.22uF	5%	50V
C311	1-130-499-00	MYLAR	0.22uF	5%	50V
C312	1-130-499-00	MYLAR	0.22uF	5%	50V
C308	1-130-489-00	MYLAR	0.033uF	5%	50V
C313	1-162-199-31	CERAMIC	10PF	5%	50V
C319	1-126-961-11	ELECT	2.2uF	20%	50V
C320	1-126-961-11	ELECT	2.2uF	20%	50V
C322	1-161-494-00	CERAMIC	0.022uF		25V
C323	1-164-159-11	CERAMIC	0.1uF		50V
C324	1-126-933-11	ELECT	100uF	20%	16V
C325	1-126-933-11	ELECT	100uF	20%	16V
C326	1-161-494-00	CERAMIC	0.022uF		25V

Ref. No.	Part No.	Description			Remarks
C327	1-126-933-11	ELECT	100uF	20%	16V
C331	1-126-961-11	ELECT	2.2uF	20%	50V
C332	1-126-961-11	ELECT	2.2uF	20%	50V
C333	1-104-664-11	ELECT	47uF	20%	16V
C334	1-104-664-11	ELECT	47uF	20%	16V
C337	1-109-889-11	ELECT	1uF	20%	50V
C339	1-126-961-11	ELECT	2.2uF	20%	50V
C340	1-126-962-11	ELECT	3.3uF	20%	50V
C341	1-109-953-11	ELECT	2.2uF	20%	50V
C342	1-109-953-11	ELECT	2.2uF	20%	50V
C343	1-126-962-11	ELECT	3.3uF	20%	50V
C344	1-126-962-11	ELECT	3.3uF	20%	50V
C345	1-162-199-31	CERAMIC	10PF	5%	50V
C346	1-162-199-31	CERAMIC	10PF	5%	50V
C347	1-126-961-11	ELECT	2.2uF	20%	50V
C348	1-126-961-11	ELECT	2.2uF	20%	50V
C349	1-126-933-11	ELECT	100uF	20%	16V
C351	1-164-159-11	CERAMIC	0.1uF		50V
C352	1-164-159-11	CERAMIC	0.1uF		50V
C354	1-126-934-11	ELECT	220uF	20%	16V
C355	1-126-934-11	ELECT	220uF	20%	16V
C363	1-164-159-11	CERAMIC	0.1uF		50V
C364	1-164-159-11	CERAMIC	0.1uF		50V
C378	1-126-961-11	ELECT	2.2uF	20%	50V
C379	1-126-961-11	ELECT	2.2uF	20%	50V
C500	1-126-960-11	ELECT	1uF	20%	50V
C501	1-126-934-11	ELECT	220uF	20%	16V
C502	1-126-960-11	ELECT	1uF	20%	50V
C503	1-162-286-31	CERAMIC	220PF	10%	50V
C504	1-162-286-31	CERAMIC	220PF	10%	50V
C505	1-162-286-31	CERAMIC	220PF	10%	50V
C506	1-126-967-11	ELECT	47uF	20%	50V
C507	1-126-967-11	ELECT	47uF	20%	50V
C511	1-162-286-31	CERAMIC	220PF	10%	50V
C512	1-162-286-31	CERAMIC	220PF	10%	50V
C551	1-162-306-11	CERAMIC	0.01uF	20%	16V
C553	1-126-960-11	ELECT	1uF	20%	50V
C554	1-126-956-11	ELECT	0.1uF	20%	50V
C555	1-126-960-11	ELECT	1uF	20%	50V
C556	1-126-933-11	ELECT	100uF	20%	16V
C571	1-126-963-11	ELECT	4.7uF	20%	50V
C193A	1-161-494-00	CERAMIC	0.022uF		25V
C500A	1-161-494-00	CERAMIC	0.022uF		25V

< FILTER >

CF101	1-579-568-11	FILTER, CERAMIC (GRX20)
CF101	1-567-415-11	FILTER, CERAMIC (RXD3)
CF102	1-567-390-11	FILTER,CERAMIC 10.7M (GRX20)
CF102	1-567-415-11	FILTER, CERAMIC (RXD3)
CF103	1-527-996-11	FILTER, CERAMIC
CF104	1-579-856-31	DISCRIMINATOR, CERAMIC

< CONNECTOR >

*	CN201	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P
*	CN501	1-568-835-11	SOCKET, CONNECTOR 16P
	CN601	1-770-395-11	PIN, CONNECTOR (PC BOARD) 11P
	CN602	1-770-395-11	PIN, CONNECTOR (PC BOARD) 11P
*	CN701	1-568-837-11	SOCKET, CONNECTOR 20P

MAIN

Ref. No.	Part No.	Description	Remarks
		< DIODE >	
D101	8-719-991-33	DIODE 1SS133T-77	
D102	8-719-991-33	DIODE 1SS133T-77	
D103	8-719-991-33	DIODE 1SS133T-77	
D104	8-719-991-33	DIODE 1SS133T-77	
D109	8-719-991-33	DIODE 1SS133T-77	
D110	8-719-109-89	DIODE RD5.6EB1T	
D111	8-719-991-33	DIODE 1SS133T-77	
D201	8-719-991-33	DIODE 1SS133T-77	
D202	8-719-991-33	DIODE 1SS133T-77	
D203	8-719-991-33	DIODE 1SS133T-77	
D301	8-719-991-33	DIODE 1SS133T-77	
D302	8-719-010-45	DIODE UZ-6.2BSA	
D303	8-719-010-16	DIODE UZ-3.0BSA	
D304	8-719-010-16	DIODE UZ-3.0BSA	
D305	8-719-921-49	DIODE MTZJ-6.2	
D306	8-719-921-49	DIODE MTZJ-6.2	
D307	8-719-991-33	DIODE 1SS133T-77	
D501	8-719-991-33	DIODE 1SS133T-77	
D502	8-719-991-33	DIODE 1SS133T-77	
D551	8-719-991-33	DIODE 1SS133T-77	
D552	8-719-991-33	DIODE 1SS133T-77	
D553	8-719-053-11	DIODE KV1560-TZ	
		< FRONTEND >	
FE101	1-693-469-11	FRONTEND (EXCEPT AEP)	
FE101	1-693-422-11	FRONTEND (AEP)	
		< IC >	
IC102	8-759-590-14	IC LA1833L	
IC103	8-759-590-13	IC LC72131D	
IC201	8-759-242-58	IC TA8189N	
IC301	8-759-595-08	IC M62439SP	
IC302	8-759-505-55	IC NJM4558L	
IC502	8-759-916-52	IC TC74HC165AP	
		< JACK >	
JK101	1-694-092-21	TERMINAL BOARD (SPEAKER) (GRX20)	
JK101	1-694-126-11	TERMINAL BOARD (SPEAKER) (RXD3)	
JK301	1-770-613-11	JACK, PIN 4P (MD IN/OUT)	
		< COIL >	
L104	1-411-901-11	COIL, ANTENNA	
L105	1-429-555-11	TRANSFORMER, MW OSC	
L106	1-408-611-31	INDUCTOR 47µH	
L108	1-410-091-31	INDUCTOR 22µH	
L109	1-412-503-11	INDUCTOR 22µH	
L113	1-412-503-11	INDUCTOR 22µH	
L114	1-412-503-11	INDUCTOR 22µH	
L251	1-429-552-11	TRANSFORMER, BIAS OSCILLATION	
L401	1-408-096-00	INDUCTOR 470µH	
		< TRANSISTOR >	
Q101	1-807-810-21	TRANSISTOR 2SC1675TP-L	
Q108	8-729-041-83	TRANSISTOR 2SK544E	
Q114	8-729-026-29	TRANSISTOR 2SJ346	
Q116	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q117	8-729-194-57	TRANSISTOR 2SC945TP-P	

Ref. No.	Part No.	Description	Remarks
Q201	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q202	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q203	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q204	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q205	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q206	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q207	8-729-119-76	TRANSISTOR 2SA733TP-P	
Q208	8-729-119-76	TRANSISTOR 2SA733TP-P	
Q209	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q213	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q214	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q251	8-729-142-46	TRANSISTOR 2SC2001TP-K1	
Q252	8-729-119-76	TRANSISTOR 2SA733TP-P	
Q253	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q301	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q302	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q305	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q306	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q307	8-729-026-29	TRANSISTOR 2SJ346	
Q308	8-729-140-96	TRANSISTOR 2SC2060-R	
Q309	8-729-140-96	TRANSISTOR 2SC2060-R	
Q320	8-729-026-29	TRANSISTOR 2SJ346	
Q501	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q502	8-729-903-32	TRANSISTOR 2SA933-R	
Q503	8-729-903-32	TRANSISTOR 2SA933-R	
Q504	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q505	8-729-903-32	TRANSISTOR 2SA933-R	
Q506	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q551	8-729-194-57	TRANSISTOR 2SC945TP-P	
Q552	8-729-194-57	TRANSISTOR 2SC945TP-P	
		< RESISTOR >	
R100	1-249-427-11	CARBON 6.8K 5% 1/4W F	
R104	1-247-807-11	CARBON 100 5% 1/4W	
R105	1-249-409-11	CARBON 220 5% 1/4W F	(GRX20)
R105	1-249-417-11	CARBON 1K 5% 1/4W F	(RXD3)
R106	1-247-849-11	CARBON 5.6K 5% 1/4W	(GRX20)
R106	1-247-807-11	CARBON 100 5% 1/4W	(RXD3)
R107	1-249-427-11	CARBON 6.8K 5% 1/4W F	
R112	1-247-698-11	CARBON 68 5% 1/4W F	
R113	1-249-417-11	CARBON 1K 5% 1/4W F	
R115	1-249-417-11	CARBON 1K 5% 1/4W F	
R116	1-249-397-11	CARBON 22 5% 1/4W F	
R117	1-247-855-11	CARBON 10K 5% 1/4W	
R118	1-247-807-11	CARBON 100 5% 1/4W	
R119	1-249-410-11	CARBON 270 5% 1/4W F	
R120	1-247-843-11	CARBON 3.3K 5% 1/4W	
R121	1-249-432-11	CARBON 18K 5% 1/4W	
R123	1-249-428-11	CARBON 8.2K 5% 1/4W F	
R124	1-247-843-11	CARBON 3.3K 5% 1/4W	
R126	1-247-843-11	CARBON 3.3K 5% 1/4W	
R127	1-247-843-11	CARBON 3.3K 5% 1/4W	
R128	1-249-431-11	CARBON 15K 5% 1/4W	
R129	1-249-431-11	CARBON 15K 5% 1/4W	
R130	1-249-405-11	CARBON 100 5% 1/4W F	
R131	1-249-417-11	CARBON 1K 5% 1/4W F	
R132	1-247-855-11	CARBON 10K 5% 1/4W	

Ref. No.	Part No.	Description			Remarks
R133	1-247-849-11	CARBON	5.6K	5%	1/4W
R134	1-247-855-11	CARBON	10K	5%	1/4W
R135	1-249-417-11	CARBON	1K	5%	1/4W F
R136	1-247-879-11	CARBON	100K	5%	1/4W
R137	1-247-855-11	CARBON	10K	5%	1/4W
R138	1-247-807-11	CARBON	100	5%	1/4W
R139	1-247-855-11	CARBON	10K	5%	1/4W
R140	1-247-839-11	CARBON	2.2K	5%	1/4W
R141	1-247-839-11	CARBON	2.2K	5%	1/4W
R142	1-247-839-11	CARBON	2.2K	5%	1/4W
R143	1-247-839-11	CARBON	2.2K	5%	1/4W
R144	1-249-409-11	CARBON	220	5%	1/4W F
R147	1-247-843-11	CARBON	3.3K	5%	1/4W
R151	1-247-843-11	CARBON	3.3K	5%	1/4W
R155	1-247-843-11	CARBON	3.3K	5%	1/4W
R156	1-247-863-11	CARBON	22K	5%	1/4W
R157	1-247-863-11	CARBON	22K	5%	1/4W
R172	1-247-847-11	CARBON	4.7K	5%	1/4W
R173	1-247-867-11	CARBON	33K	5%	1/4W
R174	1-249-409-11	CARBON	220	5%	1/4W F
R175	1-249-431-11	CARBON	15K	5%	1/4W
R201	1-249-393-11	CARBON	10	5%	1/4W F
R202	1-249-393-11	CARBON	10	5%	1/4W F
R203	1-249-393-11	CARBON	10	5%	1/4W F
R204	1-249-393-11	CARBON	10	5%	1/4W F
R205	1-249-401-11	CARBON	47	5%	1/4W F
R205A	1-249-409-11	CARBON	220	5%	1/4W F
R206	1-249-401-11	CARBON	47	5%	1/4W F
R206A	1-249-409-11	CARBON	220	5%	1/4W F
R207	1-249-428-11	CARBON	8.2K	5%	1/4W F
R208	1-249-428-11	CARBON	8.2K	5%	1/4W F
R209	1-247-889-00	CARBON	270K	5%	1/4W
R210	1-247-889-00	CARBON	270K	5%	1/4W
R211	1-247-891-00	CARBON	330K	5%	1/4W
R212	1-247-891-00	CARBON	330K	5%	1/4W
R213	1-247-847-11	CARBON	4.7K	5%	1/4W
R214	1-247-847-11	CARBON	4.7K	5%	1/4W
R215	1-247-891-00	CARBON	330K	5%	1/4W
R216	1-247-891-00	CARBON	330K	5%	1/4W
R219	1-247-871-11	CARBON	47K	5%	1/4W
R220	1-247-863-11	CARBON	22K	5%	1/4W
R221	1-247-855-11	CARBON	10K	5%	1/4W
R222	1-249-409-11	CARBON	220	5%	1/4W F
R223	1-247-885-00	CARBON	180K	5%	1/4W
R224	1-247-885-00	CARBON	180K	5%	1/4W
R225	1-247-863-11	CARBON	22K	5%	1/4W
R226	1-247-863-11	CARBON	22K	5%	1/4W
R227	1-247-881-00	CARBON	120K	5%	1/4W
R228	1-247-881-00	CARBON	120K	5%	1/4W
R229	1-249-418-11	CARBON	1.2K	5%	1/4W F
R230	1-249-418-11	CARBON	1.2K	5%	1/4W F
R231	1-247-839-11	CARBON	2.2K	5%	1/4W
R232	1-247-839-11	CARBON	2.2K	5%	1/4W
R233	1-247-863-11	CARBON	22K	5%	1/4W
R234	1-247-863-11	CARBON	22K	5%	1/4W
R235	1-247-847-11	CARBON	4.7K	5%	1/4W
R236	1-247-847-11	CARBON	4.7K	5%	1/4W
R237	1-247-855-11	CARBON	10K	5%	1/4W
R239	1-249-381-11	CARBON	1	5%	1/4W F
R240	1-247-855-11	CARBON	10K	5%	1/4W
R241	1-247-847-11	CARBON	4.7K	5%	1/4W
R242	1-247-847-11	CARBON	4.7K	5%	1/4W
R243	1-249-430-11	CARBON	12K	5%	1/4W
R244	1-247-839-11	CARBON	2.2K	5%	1/4W
R245	1-247-839-11	CARBON	2.2K	5%	1/4W
R246	1-249-434-11	CARBON	27K	5%	1/4W
R247	1-247-855-11	CARBON	10K	5%	1/4W
R248	1-247-847-11	CARBON	4.7K	5%	1/4W
R251	1-249-434-11	CARBON	27K	5%	1/4W
R252	1-249-393-11	CARBON	10	5%	1/4W F
R253	1-249-413-11	CARBON	470	5%	1/4W F
R254	1-247-855-11	CARBON	10K	5%	1/4W
R255	1-247-847-11	CARBON	4.7K	5%	1/4W
R261	1-247-843-11	CARBON	3.3K	5%	1/4W
R262	1-247-843-11	CARBON	3.3K	5%	1/4W
R301	1-249-427-11	CARBON	6.8K	5%	1/4W F
R302	1-249-427-11	CARBON	6.8K	5%	1/4W F
R303	1-249-417-11	CARBON	1K	5%	1/4W F
R304	1-249-417-11	CARBON	1K	5%	1/4W F
R309	1-249-427-11	CARBON	6.8K	5%	1/4W F
R310	1-249-427-11	CARBON	6.8K	5%	1/4W F
R311	1-247-847-11	CARBON	4.7K	5%	1/4W
R312	1-247-847-11	CARBON	4.7K	5%	1/4W
R313	1-247-871-11	CARBON	47K	5%	1/4W
R314	1-247-871-11	CARBON	47K	5%	1/4W
R315	1-247-871-11	CARBON	47K	5%	1/4W
R316	1-247-871-11	CARBON	47K	5%	1/4W
R317	1-247-871-11	CARBON	47K	5%	1/4W
R318	1-247-871-11	CARBON	47K	5%	1/4W
R319	1-247-871-11	CARBON	47K	5%	1/4W
R320	1-247-871-11	CARBON	47K	5%	1/4W
R323	1-247-871-11	CARBON	47K	5%	1/4W
R324	1-247-871-11	CARBON	47K	5%	1/4W
R325	1-247-839-11	CARBON	2.2K	5%	1/4W
R326	1-247-839-11	CARBON	2.2K	5%	1/4W
R327	1-247-839-11	CARBON	2.2K	5%	1/4W
R328	1-247-855-11	CARBON	10K	5%	1/4W
R329	1-249-430-11	CARBON	12K	5%	1/4W
R330	1-249-417-11	CARBON	1K	5%	1/4W F
R331	1-249-417-11	CARBON	1K	5%	1/4W F
R332	1-247-871-11	CARBON	47K	5%	1/4W
R333	1-247-871-11	CARBON	47K	5%	1/4W
R334	1-247-849-11	CARBON	5.6K	5%	1/4W
R335	1-247-849-11	CARBON	5.6K	5%	1/4W
R336	1-247-827-11	CARBON	680	5%	1/4W
R337	1-247-827-11	CARBON	680	5%	1/4W
R339	1-215-857-11	METAL OXIDE	10	5%	1W F
R341	1-249-413-11	CARBON	470	5%	1/4W F
R342	1-249-418-11	CARBON	1.2K	5%	1/4W F
R345	1-247-871-11	CARBON	47K	5%	1/4W
R346	1-247-871-11	CARBON	47K	5%	1/4W
R347	1-247-901-11	CARBON	820K	5%	1/4W
R349	1-249-418-11	CARBON	1.2K	5%	1/4W F
R350	1-247-827-11	CARBON	680	5%	1/4W
R352	1-247-863-11	CARBON	22K	5%	1/4W
R358	1-249-413-11	CARBON	470	5%	1/4W F
R359	1-202-463-00	SOLID	2.2M	5%	1/4W
R360	1-202-463-00	SOLID	2.2M	5%	1/4W
R361	1-247-855-11	CARBON	10K	5%	1/4W
R362	1-247-855-11	CARBON	10K	5%	1/4W

Ref. No.	Part No.	Description			Remarks
R363	1-249-418-11	CARBON	1.2K	5%	1/4W F
R364	1-249-418-11	CARBON	1.2K	5%	1/4W F
R365	1-247-839-11	CARBON	2.2K	5%	1/4W
R366	1-247-839-11	CARBON	2.2K	5%	1/4W
R367	1-247-839-11	CARBON	2.2K	5%	1/4W
R368	1-247-839-11	CARBON	2.2K	5%	1/4W
R369	1-247-871-11	CARBON	47K	5%	1/4W
R370	1-247-871-11	CARBON	47K	5%	1/4W
R371	1-249-417-11	CARBON	1K	5%	1/4W F
R372	1-249-417-11	CARBON	1K	5%	1/4W F
R373	1-247-879-11	CARBON	100K	5%	1/4W
R500	1-249-417-11	CARBON	1K	5%	1/4W F
R501	1-249-418-11	CARBON	1.2K	5%	1/4W F
R502	1-249-417-11	CARBON	1K	5%	1/4W F
R503	1-249-417-11	CARBON	1K	5%	1/4W F
R504	1-247-847-11	CARBON	4.7K	5%	1/4W
R505	1-249-417-11	CARBON	1K	5%	1/4W F
R506	1-249-417-11	CARBON	1K	5%	1/4W F
R507	1-249-417-11	CARBON	1K	5%	1/4W F
R508	1-247-847-11	CARBON	4.7K	5%	1/4W
R509	1-247-839-11	CARBON	2.2K	5%	1/4W
R510	1-247-855-11	CARBON	10K	5%	1/4W
R511	1-247-855-11	CARBON	10K	5%	1/4W
R512	1-249-417-11	CARBON	1K	5%	1/4W F
R513	1-247-846-11	CARBON	4.3K	5%	1/4W
R514	1-247-855-11	CARBON	10K	5%	1/4W
R515	1-249-417-11	CARBON	1K	5%	1/4W F
R516	1-249-417-11	CARBON	1K	5%	1/4W F
R517	1-247-847-11	CARBON	4.7K	5%	1/4W
R518	1-247-839-11	CARBON	2.2K	5%	1/4W
R519	1-247-847-11	CARBON	4.7K	5%	1/4W
R520	1-247-847-11	CARBON	4.7K	5%	1/4W
R521	1-247-847-11	CARBON	4.7K	5%	1/4W
R522	1-247-847-11	CARBON	4.7K	5%	1/4W
R523	1-247-847-11	CARBON	4.7K	5%	1/4W
R524	1-247-839-11	CARBON	2.2K	5%	1/4W
R525	1-247-855-11	CARBON	10K	5%	1/4W
R526	1-249-417-11	CARBON	1K	5%	1/4W F
R527	1-249-413-11	CARBON	470	5%	1/4W F
R528	1-247-847-11	CARBON	4.7K	5%	1/4W
R551	1-247-855-11	CARBON	10K	5%	1/4W
R553	1-247-885-00	CARBON	180K	5%	1/4W
R554	1-247-899-11	CARBON	680K	5%	1/4W
R555	1-247-855-11	CARBON	10K	5%	1/4W
R556	1-249-411-11	CARBON	330	5%	1/4W
R557	1-247-885-00	CARBON	180K	5%	1/4W
R558	1-247-899-11	CARBON	680K	5%	1/4W
R559	1-247-855-11	CARBON	10K	5%	1/4W
R560	1-249-411-11	CARBON	330	5%	1/4W
R561	1-247-855-11	CARBON	10K	5%	1/4W
R562	1-247-879-11	CARBON	100K	5%	1/4W
R563	1-249-409-11	CARBON	220	5%	1/4W F
R572	1-247-871-11	CARBON	47K	5%	1/4W
		< ADJUSTABLE RESISTOR >			
SRF101	1-228-996-00	RES, ADJ, METAL47K			
SRF501	1-228-991-00	RES, ADJ, METAL2.2K			
		< SWITCH>			
SW101	1-762-735-11	SWITCH, SLIDE (9kH/10kHz)(E,AUS,SP,TW)			

Ref. No.	Part No.	Description			Remarks
		< TRANSFORMER >			
T102	1-429-554-11	TRANSFORMER, AM IFT			
		< TRIMMER CAP >			
TC102	1-141-304-21	CAP, TRIMMER	10PF		
TC104	1-141-304-21	CAP, TRIMMER	10PF		
		< VIBRATOR >			
X101	1-579-585-11	VIBRATOR, CRYSTAL (7.2MHz)			
**********					
	1-674-792-11	MOTOR BOARD			
		**********			
		< CAPACITOR >			
C775	1-124-259-11	ELECT	4.7uF	20%	50V
C776	1-164-159-11	CERAMIC	0.1uF	50V	
		< CONNECTOR >			
* CN06	1-568-824-11	SOCKET, CONNECTOR 5P			
**********					
*	1-639-678-12	MOTOR (6P) (S) BOARD			
		**********			
		< CONNECTOR >			
CN1	1-564-722-11	PIN, CONNECTOR (SMALL TYPE) 6P			
		< MOTOR >			
M101	X-2625-877-1	MOTOR ASSY (SPINDLE)			
M102	X-2625-769-1	MOTOR ASSY (SLED)			
		< SWITCH >			
S1	1-572-085-11	SWITCH, LEAF (LIMIT)			
**********					
	1-674-794-11	PHOTO SOCKET BOARD			
		**********			
		< CAPACITOR >			
C710A	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
* CN703	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
		< IC >			
PH701	8-749-923-04	IC TOTX178A			
**********					

Ref. No.	Part No.	Description			Remarks
	1-674-556-11	SENSOR BOARD			
		**********			
		< CAPACITOR >			
C600	1-126-964-11	ELECT	10uF	20%	50V
		< IC >			
RM601	8-749-013-84	IC SPS-447-1			
**********					
	1-674-788-11	SW (A) BOARD			
		**********			
		< SWITCH >			
S04	1-771-169-11	SWITCH (TURN TABLE OPERATION)			
**********					
	1-674-789-11	SW (B) BOARD			
		**********			
		< SWITCH >			
S03	1-771-169-11	SWITCH (TURN TABLE POSITION)			
**********					
	1-674-790-11	SW (C) BOARD			
		**********			
		< SWITCH >			
S02	1-571-300-31	SWITCH, ROTART (OPEN/CLOSE)			
**********					
	1-674-791-11	SW (D) BOARD			
		**********			
		< SWITCH >			
S01	1-571-300-31	SWITCH, ROTARY (OPTICAL PICK-UP DET)			
**********					
	1-674-554-11	TR BOARD			
		********			
		< TRANSISTOR >			
Q701	8-729-822-89	TRANSISTOR 2SD1667			
**********					
	1-674-561-11	VR BOARD			
		********			
		< VARIABLE RESISTOR >			
VR601	1-475-807-11	ENCODER, ROTARY (VOLUME)			
**********					

Ref. No.	Part No.	Description	Remarks
		MISCELLANEOUS	
		**********	
⚠9	1-551-506-99	CORD, POWER (GRX20:E,MX)	
⚠9	1-555-795-00	CORD, POWER (GRX20:SP,TW/RXD3:AED,AEP,CIS,G)	
⚠9	1-696-572-21	CORD, POWER (RXD3:UK)	
⚠9	1-696-966-11	CORD, POWER (GRX20:AUS)	
⚠9	1-783-941-41	CORD, POWER (GRX20:AR)	
⚠14	1-569-008-21	ADAPTOR, CONVERSION 2P (SP,TW)	
86	1-772-163-11	DECK, MECH	
87	1-783-579-11	WIRE(FLAT TYPE) (16 CORE)	
88	1-769-273-11	WIRE(FLAT TYPE) (22 CORE)	
151	1-769-856-11	WIRE (FLAT TYPE) (5 CORE)	
210	1-783-740-11	WIRE (FLAT TYPE)	
⚠211	8-820-054-03	OPTICAL PICK-UP KSS-213ECM/C2NP	
M101	X-2625-877-1	MOTOR ASSY (SPINDLE)	
M102	X-2625-769-1	MOTOR ASSY (SLED)	
M103	X-4948-765-1	MOTOR ASSY	
M104	X-4948-766-1	MOTOR ASSY (A)	
⚠T001	1-433-917-11	TRANSFORMER, POWER (GRX20:MX)	
⚠T001	1-433-918-11	TRANSFORMER, POWER (RXD3)	
⚠T001	1-433-919-11	TRANSFORMER, POWER (GRX20:AR,E,SP,TW)	
⚠T001	1-433-920-11	TRANSFORMER, POWER (GRX20:AUS)	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-246-19	SCREW +KTP 3 × 8 TYPE2 NON-SLIT	
#2	7-685-660-79	SCREW +PTPWH 4 × 10 TYPE 2	
#3	7-685-903-31	SCREW +PTPWH 3 × 10 (TYPE2)	
#4	7-682-548-09	SCREW +B 3 × 8	
#5	7-685-647-79	SCREW +BVTP 3 × 10 TYPE2 N-S	
#6	7-685-648-79	SCREW +BVTP 3 × 12 TYPE2 N-S	
#7	7-685-649-14	SCREW +BVTP 3 × 14 TYPE2 N-S	
#8	7-685-106-19	SCREW +P 2 × 10 TYPE2 SLIT	
#9	7-685-131-19	SCREW +P 2.6 × 4 TYPE2 SLIT	
#10	7-685-138-19	SCREW +BTP 2.6 × 16 TYPE2 N-S	
#11	7-685-902-21	SCREW +PTPWH 2.6 × 8 (TYPE2)	
#12	7-624-118-01	RING, RETAINING E-2.5	
#13	7-685-903-21	SCREW +PTPWH 3 × 8 (TYPE2)	
#14	7-685-139-29	SCREW, TAPPING, (M2.6 × 20)	

The components identified by mark ⚠or dotted line with mark ⚠are critical for safety.
Replace only with part number specified.

9-928-949-11

Sony Corporation
Home Audio Company

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